

VILLA STRUMA 50 EC

MATERIAL SAFETY DATA SHEET

1. PRODUCT & COMPANY IDENTIFICATION

Product Name: STRUMA 50 EC
 Insecticide
UN No.: 3352
Supplier: Villa Crop Protection (Pty) Ltd.
 PO Box 10413,
 Aston Manor, 1630, South Africa
Telephone: (011) 396 2233
Fax: (011) 396 4666
Website: www.villacrop.co.za

Emergency telephone numbers:
24 Hr Transport / Spill emergency no:
 Envirosure. +27 31 205 4918
 (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
Villa Crop Protection Emergency number:
National Safety, Health and Environmental Manager:
 +27 63 698 0668

2. COMPOSITION/INFORMATION ON INGREDIENTS

Common Name: Lambda-cyhalothrin + Flufenoxuron
Chemical Name: Lambda-cyhalothrin: equal quantities of:
 (S)- α -cyano-3-phenoxybenzyl (Z)-(1R,3R)-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropanecarboxylate
And
 (R)- α -cyano-3-phenoxybenzyl (Z)-(1S,3S)-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropanecarboxylate (IUPAC)
Flufenoxuron: 1-[4-(2-chloro- α,α,α -trifluoro-*p*-tolylloxy)-2-fluorophenyl]-3-(2,6-difluorobenzoyl)urea (IUPAC)
CAS No.: Lambda-cyhalothrin: [91465-08-6]
Flufenoxuron: [101463-69-8]
Chemical Family: Lambda-cyhalothrin: pyrethroid
Flufenoxuron: benzoylurea

Chemical Formula: Lambda-cyhalothrin:
 $C_{23}H_{19}ClF_3NO_3$
Flufenoxuron:
 $C_{21}H_{11}ClF_6N_2O_3$
Formulation: Emulsifiable Concentrate
Use / Mode of Action: Insecticide with contact and stomach action.
Hazardous Ingredient:

Component	Content (g/l)
Lambda-cyhalothrin	± 25
Flufenoxuron	± 25

SYMBOLS: X_n, X_i, N
RISK-PHASE(S): R 20/22, 21, 36/37/38, R51/53

3. HAZARD IDENTIFICATION

Toxic to aquatic organisms. Dangerous for the environment
Toxicity class: WHO II
Likely routes of exposure: Skin and eye contact, ingestion and inhalation.
Eye contact: Slightly irritant.
Skin contact: Slightly irritant.

4. FIRST AID MEASURES AND PRECAUTIONS

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 the source of contamination or move person to fresh air. Keep the patient under observation. If irritation persists, obtain medical attention immediately.
Skin contact: Remove contaminated clothing, shoes and leather goods immediately. Gently wipe off excess chemical. Wash skin gently and thoroughly with non-abrasive soap or mild detergent and large amounts of water until no evidence of chemical remains (approximately 15 to 20 minutes). Seek medical advice if necessary.
Eye contact: 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). If irritation persists, get medical attention.
Ingestion: Have victim rinse mouth thoroughly with water.
Do not induce vomiting, Seek medical advice immediately. If the person is alert and respiration is not depressed, give large quantity of water to drink. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomit.

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Advice to physician: There is no specific antidote available. This product contains materials that may cause severe pneumonitis if aspirated. In cases of ingestion, consider gastric lavage, however prevent aspiration. Observe patient for respiratory difficulty from aspiration pneumonitis. Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Fire/Explosion hazard:

Flammability: Non-flammable. Not combustible. However, following evaporation of aqueous component residual material can burn if ignited. On burning may emit toxic fumes.

Flash point: No Flash point

Extinguishing agents: Extinguish fires with water fog, dry extinguishing media or carbon dioxide. 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 firefighting for later disposal. Avoid the accumulation of polluted run-off from the site.

Possible harmful fumes in a fire: Carbon monoxide, hydrogen chloride, hydrogen cyanide, nitrogen oxides, organochloric compounds, sulphur oxides can be released. Avoid breathing smoke and fumes.

Firefighting: 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 firefighting for later disposal. Avoid the accumulation of polluted run-off from the site.

Personal protective equipment: Fire may produce irritating or poisonous vapours or gases (oxides of chlorine and sulphur) 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 fumes. For personal protection see Section 8.

Occupational spill: Do not touch-spilled material; stop leak if you can do it without risk. Keep out unprotected persons and animals.

For spills: Soak up with absorptive material such as damp earth or sand or other suitable non-combustible absorbent material. Place the material into a clean, dry container and cover for subsequent disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Prevent material from spreading by damming in with absorptive material. Do not flush spilled material into drains. Keep spectators away and upwind.

To decontaminate spill area, tools and equipment, wash with a suitable solution (i.e. organic solvent, detergent bleach or caustic). Add the solution to the drums already collected. Label drums with its content and dispose it in accordance with local regulations.

Open burning or dumping of this material is prohibited.

Do not get water inside containers.

7. HANDLING AND STORAGE REQUIREMENTS

Handling: Harmful if swallowed. Avoid inhalation and contact with eyes and skin. Use with adequate ventilation. Do not handle broken packages without protective equipment. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Remove clothing immediately if the product gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Seek medical advice.

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.

Worker should shower at the end of each work day. Launder all clothing before it is re-used again.

Storage: Store in its original container in dry, cool, well-ventilated area. Do not store near heat, open flame or hot surface. Store in original containers only. Not to be stored next to foodstuffs and water supplies.

Keep out of reach of children, uninformed persons and animals. Do not contaminate other pesticides and fertilizers.

Storage stability: Stable under normal warehouse storage conditions.

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8. EXPOSURE CONTROL/PERSONAL PROTECTION

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. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

PERSONAL PROTECTIVE EQUIPMENT:

Respirator: An approved full-face respirator suitable for protection from spray or mists of pesticides is required. For dust exposure wear, as a minimum, a properly fitted half-face or full-face air-purifying respirator which is approved for pesticides. Respiratory use and selection must be based on airborne concentrations. Limitations of respirator use specified by the approved agency and the manufacturer must be observed.

Clothing: Employee must wear appropriate protective (impervious) clothing; overalls or long-sleeves uniform, boots, hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing.

Gloves: Employee must wear appropriate chemical resistant protective gloves to prevent contact with this substance.

Eye protection: The use of chemical resistant goggles or face shield.

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: Light yellow liquid.

Odour: Slight aromatic odour.

Bulk Density: 0.91 g/cm³ (20°C).

Flash point: Not applicable

Flammability: Non flammable

pH: 5.0 to 8.0

10. STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions for a period of 2 years.

Conditions to avoid: Avoid extreme heat and direct sunlight.

Hazardous decomposition: Toxic gases/vapour.

Hazard Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Formulation (calculated):

Acute oral LD₅₀: 2933 mg/kg.

Acute dermal LD₅₀: 19608 mg/kg.

Acute skin irritation: Slightly skin irritant.

Acute eye irritation: Slightly eye irritant.

Sensitization: No skin sensitization.

12. ECOLOGICAL INFORMATION

Lambda-cyhalothrin:

Degradability: Rats: Compound is rapidly metabolized and excreted via the urine and faeces. The ester bond is hydrolysed to form polar, water soluble compounds, which are less toxic and more easily eliminated.

Soil: Is moderately persistent in the soil. Field half-lives range from 4 to 12 weeks. Lambda-cyhalothrin shows a high affinity for soil, reported Koc is 180 000, and not expected to be appreciably mobile in most soils. Little potential for groundwater contamination.

Water: Lambda-cyhalothrin has extremely low water solubility and is tightly bound to soil, it is therefore not expected to be prevalent in surface waters.

Flufenoxuron:

Soil/Environment Strongly adsorbed in soil, DT₅₀ 42 d (clay loam). Use in orchards over 3 years at a dose of 97.5 g/ha gave rise to low residues in soil which did not significantly affect soil organisms, including earthworms

ECOTOXICOLOGY:

Birds: Lambda-cyhalothrin:

Slightly too practically non-toxic.

Oral LD₅₀: Mallard ducks: > 3950 mg/kg

LC₅₀ (diet): Quail: > 5300 mg/kg diet

No evidence of accumulation in eggs or tissue of birds.

Flufenoxuron:

Oral LD₅₀: bobwhite quail >2000 mg/kg.

Fish: Lambda-cyhalothrin: Highly toxic.

LC₅₀ (96 hours): Rainbow trout: 0.36 µg/l

Bluegill sunfish: 0.21 µg/l

Flufenoxuron:

LC₅₀ (96 h): rainbow trout >4.9 µg/l.

Daphnia: Lambda-cyhalothrin:

EC₅₀ (48 hours): *Daphnia magna*: 0.36 µg/l

Flufenoxuron:

LC₅₀ (48 h): *Daphnia magna*: 0.04 µg/l.

Bees: Lambda-cyhalothrin: Highly toxic.

LD₅₀ (oral): 38 ng/bee

LC₅₀ (contact): 909 ng/bee

Flufenoxuron:

LD₅₀ (oral) : >109.1 µg/bee,

LD₅₀ (contact) : >100 µg/bee

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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 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 a third of the volume 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 No.: 3352

Road Transport ADR/IRD:

Class: 9. Packing group: III
 Shipping name: PYRETHROID PESTICIDE,
 LIQUID, TOXIC.
**(Lambda-cyhalothrin 25 g/l
 Flufenoxuron 25 g/l)**

Maritime Transport IMDG/IMO:

Class: 9. Packing group: III
 Shipping name: PYRETHROID PESTICIDE,
 LIQUID, TOXIC.
**(Lambda-cyhalothrin 25 g/l
 Flufenoxuron 25 g/l)**

15. REGULATORY INFORMATION

Symbol: N, X_n, X_i

Indication of danger: Environmentally dangerous substance, Harmful Substance and Slightly Irritating Substance.

Risk phrases:

R 20/22 Harmful by inhalation and if swallowed.

R 21 Harmful in contact with skin.

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

Safety phrases:

S 1/2 Keep locked up and out of the reach of children.

S 3/7/9 Keep container tight closed in cool well ventilated place.

S 13 Keep away from food, drink and animal feeding stuffs.

S15 Keep away from heat.

S 20/21 when using not eat or drink.

S 29/35 Do not empty into drains; dispose of this material and its container in a safe way.

S 45 In case of accident or if you feel unwell, seek medical advice immediately.

S 24/25 Avoid contact with skin and eyes.

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

S 60 This material and its container must be disposed of as hazardous waste.

16. OTHER INFORMATION

Packing and Labelling: Packed in 10, 20, 50, 100, 200, 250 & 500 ml, 1, 5, 10, 20 & 25 litres fluorinated plastic containers and labelled according to the 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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For detailed information on revisions, contact the Registration holder.