

MATERIAL SAFETY DATA SHEET

Emergency Phone: CHEMTREC 800-424-9300

Effective Date: March 5, 2012

New

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Willowood Lambda-Cy 1EC

CHEMICAL NAME: Lambda Cyhalothrin (cis-3-{2-chloro-3,3,3-trifluoro-1-propenyl}-2,2-dimethylcyclopropanecarboxylic acid)

CHEMICAL FAMILY: Pyrethroid Insecticide

PRODUCT CODE: EPA Reg. No. 87290-24

COMPANY IDENTIFICATION:

Willowood, LLC

1600 NW Garden Valley Blvd. #120

Roseburg, OR 97471

Tel: 877-679-9963

24/7 Health Emergencies: Call 800-858-7378 (National Pesticide Information Center)

2. COMPOSITION, INFORMATION OF INGREDIENTS:

Components

Name	CAS - No.	EINECS #	Average % by Weight
Lambda Cyhalothrin, 95%	91465-08-6	415-130-7	13.8
NE			86.2

3. HAZARDS IDENTIFICATION SUMMARY:

NOTE: Please refer to Section 11 for detailed toxicological information.

EMERGENCY OVERVIEW: WARNING! Lambda Cyhalothrin is an environmentally hazardous substance. It can irritate the skin, eyes, and respiratory system, and it can be absorbed through the skin. Irritation can last for 24-36 hours following exposure. Lambda Cyhalothrin may cause an allergic reaction. It can cause temporary itching, burning, tingling sensation, or even numbness which is called paresthesia. Lambda Cyhalothrin is harmful if swallowed. Ingestion of large quantities of Lambda Cyhalothrin can result in convulsions and loss of consciousness.

There is no evidence that Lambda Cyhalothrin is teratogenic, mutagenic, or may be a human carcinogen. Lambda Cyhalothrin is highly toxic to fish and bees, but has low toxicity for birds and animals. Avoid breathing mist or aerosol.

PHYSICAL STATE: Liquid.

APPEARANCE: Pale yellow to amber liquid.

ROUTE OF EXPOSURE: Inhalation, Ingestion, Skin Contact, Skin Absorption, or Eye Contact.

IMMEDIATE EFFECTS:

Eye: Can cause moderate eye irritation. Do not get in eyes.

Skin: Avoid contact with skin and clothing.

Skin Irritation: Can cause substantial acute skin irritation and allergic reaction, but is unlikely to cause chronic irritation or sensitization by skin contact.

Ingestion: Harmful if swallowed. Do not take internally.

Inhalation: Harmful if inhaled. Avoid breathing dust or aerosol.

CHRONIC OR DELAYED LONG-TERM: There is no evidence Lambda Cyhalothrin is a human mutagen, teratogen, or carcinogen.

Medical Conditions Aggravated by Exposure: May cause upper respiratory irritation, or temporary irritation to the eyes.

4. FIRST AID MEASURES:

GENERAL: Have the product container or label with you when calling a poison control center or doctor or going for treatment.

INHALATION: Move the exposed person to fresh air, free from risk of further exposure. If the person is not breathing call 9-1-1, then give artificial respiration. Seek medical attention as soon as possible.

EYE CONTACT: Flush with clean, lukewarm water raising upper and lower eyelids at low pressure for 15 minutes. Remove contact lenses, if present, after the first five minutes and continue to rinse the eyes. Seek medical attention if no relief.

SKIN CONTACT: Remove any contaminated clothing. Rinse area with clean water for 15-20 minutes. Call poison control center or doctor for treatment advice.

INGESTION: Call a poison control center or doctor immediately for treatment advice. Have the affected person drink a glass of water if they are able to swallow. DO NOT INDUCE VOMITING. Lower the head if the exposed person is vomiting to minimize entry into throat and lungs.

NOTE to Physician: There is no specific antidote. Use appropriate supportive and symptomatic treatment as indicated by the patient's condition.

5. FIRE FIGHTING MEASURES:

FLASH POINT: 194 °F (90 °C).

AUTOIGNITION TEMPERATURE: This product is unlikely to undergo spontaneous decomposition.

FIRE AND EXPLOSION HAZARDS: During a fire, thermal decomposition of Lambda Cyhalothrin can produce irritating and toxic gases, including hydrogen cyanide, hydrogen fluoride, hydrogen chloride, nitrogen oxides and carbon oxides. Under extreme dusting conditions Lambda Cyhalothrin may form an explosive mixture in air.

SUITABLE EXTINGUISHING MEDIA: Use water spray, dry chemicals, carbon dioxide, or foam.

FIRE FIGHTING INSTRUCTIONS: Wear encapsulated suit and NIOSH-approved self-contained breathing apparatus while fighting a fire where this product is burning. Keep out of smoke. Fight fire from an upwind position. Cool closed containers exposed to fire with water spray. Dike the area to prevent runoff and contamination of water sources. Equipment or materials involved in pesticide fires may become contaminated.

6. ACCIDENTAL RELEASE MEASURES: PERSONAL PRECAUTIONS: Wear PPE per Section 8. Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

METHODS FOR CLEANING UP: Avoid creating a dust cloud. Sweep up spilled material. Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

HANDLING AND STORAGE PRECAUTIONS: Use normal safety procedures and good personal hygiene. Wash thoroughly after use and before eating, drinking, chewing gum, or using tobacco.

ADDITIONAL ADVICE: Do not allow material to enter streams, sewers, or other waterways. Lambda Cyhalothrin is highly toxic to fish and aquatic invertebrates.

7. HANDLING AND STORAGE:

STORAGE TEMPERATURE: Keep containers tightly closed. Avoid temperatures above 38 °C (100 °F) or below 0°C (32 °F). Store in a cool, dry, well-ventilated area.

SPECIAL SENSITIVITY: Avoid contact with skin and eyes. Wear PPE per Section 8.

HANDLING AND STORAGE PRECAUTIONS: Avoid breathing Lambda Cyhalothrin mist or vapors. Use normal safety procedures and good personal hygiene. Remove and wash PPE as soon as possible after handling product. Wash thoroughly after use, and before eating, drinking, chewing gum, or using tobacco.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION:

EYE PROTECTION: Use approved safety glasses, goggles, or face shield when there is potential for dust exposure to cause irritation to the eyes.

SKIN PROTECTION: Wear chemically resistant gloves (e.g. nitrile, butyl, or neoprene.) Wear a long-sleeved shirt, long pants, shoes, and socks.

RESPIRATORY PROTECTION: Wear a NIOSH-approved respirator if the airborne conditions result in a mist or aerosol forming. A respirator is recommended when handling Lambda-Cy 1EC.

OCCUPATIONAL EXPOSURE LIMITS: None.

ENGINEERING CONTROLS: Provide adequate ventilation when product is used. Eyewash and shower should be provided in mixing and loading areas.

9. PHYSICAL AND CHEMICAL PROPERTIES:

PHYSICAL FORM: liquid

ODOR: aromatic odor.

DENSITY OF SOLID (water=1): 0.93 g/cm³ @ 25 °C.

pH IN WATER: Slightly acidic.

COLOR: Light yellow liquid

SOLUBILITY IN WATER: Insoluble.

FLASH POINT: 194 °F (90 °C).

10. STABILITY AND REACTIVITY:

STABILITY: This product is a stable material under normal conditions of storage and handling. Avoid temperatures above 38 °C (100 °F).

HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBLES: Avoid contact with strong oxidizing agents.

DECOMPOSITION PRODUCTS: Products of thermal decomposition and/or combustion can include hydrogen chloride, hydrogen fluoride, hydrogen cyanide, and oxides of nitrogen, and carbon.

11. TOXICOLOGICAL INFORMATION:

Oral LD₅₀ (rat) = > 50 mg/kg

Dermal LD₅₀ (rat) = > 600 mg/kg

Inhalation LC₅₀ (rat) = 0.06 mg/L/4hour

There is no evidence that Lambda Cyhalothrin causes cancer in humans, although there is some evidence of a possible carcinogenic effect at very high doses in some animal studies.

The majority of tests on Lambda Cyhalothrin have not shown it to be mutagenic.

There was no evidence that Lambda Cyhalothrin, causes skin eye irritation or sensitization in rabbit or guinea pig studies.

The significant routes of exposure are eyes, ingestion, skin contact, and inhalation.

12. ECOLOGICAL INFORMATION:

Dietary LC₅₀ (bobwhite quail) = > 7000 mg/L

Oral LC₅₀ (mallard duck) = > 3,500 mg/L.

(This indicates that Lambda Cyhalothrin is only slightly toxic to most bird species.)

96-hour LC₅₀ (rainbow trout) = 0.36 µg/L.

96-hour LC₅₀ (bluegill sunfish) = 0.21 µg/L.

48-hour EC₅₀ (daphnia magna) = 0.36 µg/L.

(This indicates that Lambda Cyhalothrin is highly toxic to fish and other aquatic organisms.)

Lambda Cyhalothrin is highly toxic to honeybees. Do not apply where bees will be exposed to product.

Prevent Lambda Cyhalothrin from getting into any waterways.

13. DISPOSAL CONSIDERATIONS:

WASTE DISPOSAL METHOD: Lambda-Cy 1EC is a liquid. Wear a respirator or NIOSH-approved self-contained breathing apparatus and other required PPE while disposing of Lambda-Cy1EC. Dispose of in accordance with label instructions and in accordance with all local, state, and federal regulations.

14. TRANSPORT INFORMATION:

US DOT (ground) SHIPPING NAME: Lambda Cyhalothrin 1EC is a liquid pyrethroid pesticide, toxic, UN-Number 3352, DG Class 6.1, Packing Group III, per 49CFR Part172.101(12)(iv).

IATA (air) SHIPPING NAME: Lambda Cyhalothrin 1EC is a liquid pyrethroid pesticide, toxic, UN-Number 3352, DG Class 6.1, Packing Group III.

IMO (water) SHIPPING NAME: Lambda Cyhalothrin 1EC is a liquid pyrethroid pesticide, toxic, UN-Number 3352, DG Class 6.1, Packing Group III, Marine Pollutant.

15. REGULATORY INFORMATION:

OSHA STATUS: None.

TSCA STATUS: Exempted, FIFRA regulated

CERCLA REPORTABLE QUANTITY: None

CALIFORNIA PROPOSITION 65: This product contains a substance known to the State of California to cause cancer (Naphthalene)

RCRA STATUS: None.

SARA 302/311/312 HAZARD NOTIFICATION/REPORTING

IMMEDIATE Y **FIRE** Y **SUDDEN RELEASE OF PRESSURE** N

DELAYED Y **REACTIVE** N

SARA TITLE III: Acute health hazard: Yes; Chronic Health Hazard: Yes.

SECTION 302 EXTREMELY HAZARDOUS: None.

SECTION 311/312 HAZARD CATEGORIES: None.

SECTION 313 TOXIC CHEMICALS: Yes.

RIGHT TO KNOW: NJ, PA – Lambda Cyhalothrin: PA – Solvesso/Aromatic 200.

16. OTHER INFORMATION:

National Fire Protection Association (NFPA)

Hazardous Materials Identification System (HMIS)

NFPA		HMIS
	0 Least	
3 Health	1 Slight	3 Health
1 Flammability	2 Moderate	1 Flammability
0 Instability	3 High	0 Reactivity
	4 Severe	H PPE

RISK PHRASES: R21, Harmful in contact with skin; R36, Irritating to eyes; and R51, Toxic to aquatic organisms.

SAFETY PHRASES: S2, Keep out of reach of children; S9, Keep container in a well-ventilated place; S25, Avoid contact with eye; S36, Wear suitable protective clothing; S37, Wear suitable gloves; S38, In case of insufficient ventilation, wear suitable respiratory equipment; S39, Wear eye/face protection; S61,

Avoid release to the environment; and S62, If swallowed, do not induce vomiting: seek medical advice immediately and show the product container or label.

REASON FOR ISSUE: Additional irritation and allergy cautions

APPROVAL DATE: 03/05/2012

PREPARED BY: Jack Firkins

ABBREVIATIONS

ACGIH	American Conference of Governmental Industrial Hygienists
AICS	Australian Inventory of Chemical Substances
CAS#	Chemical Abstract Service Number
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
°C	Celsius temperature scale
CI	China
DSL	Canada Domestic Substances List
ECL	Korean Existing Chemicals List
EEC	European Economic Commission
ENCS	Japanese existing Chemical List
EINECS #	European Inventory of Existing Chemical Substance Number
EU	European Union
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
(Israel)	2001 proposed list of chemical substances to be regulated under Israel Hazardous Substances Law and Regulations List of 1993
IARC	International Agency for Research on Cancer
MAC	Netherlands
MAK	Germany
MITI	Ministry of International Trade and Industry
NA	Not Applicable
ND	Not Determined
NE	Not Established
NIOSH	National Institute of Occupational Safety and Health
NPIC	National Pesticide Information Center
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Act
PICCS	Philippines
PPE	Personal Protective Equipment
Prop	Proprietary
SARA	Superfund Amendments and Reauthorization Act
SWISS	Giftliste 1 and Inventory of Notified New Substances
TSCA	Toxic Substances Control Act
(Taiwan)	List of Toxic Chemical Substances regulated under Taiwan Toxic Chemical Substances Control Act of November 26, 1986
UK	United Kingdom
USA	United States of America

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