

Material Safety Data Sheet

Product Name: Lambda-cyhalothrin 2.5%EC

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: Lambda-cyhalothrin 2.5% EC

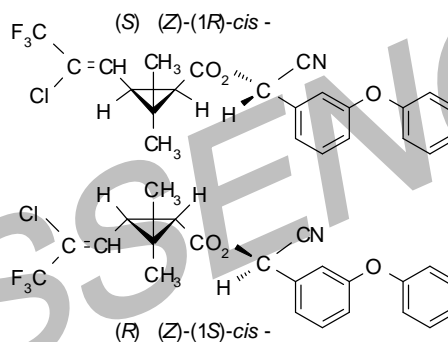
CAS: 91465-08-6

Molecular Weight: 449.9

Chemical Name: Lambda-cyhalothrin

Chemical Formulation: C₂₃H₁₉ClF₃NO₃

Chemical Structure:



Uses: Control of a wide spectrum of insect pests, e.g. aphids, Colorado beetles, thrips, Lepidoptera larvae, Coleoptera larvae and adults, etc., in cereals, hops, ornamentals, potatoes, vegetables, cotton, and other crops. Provides good control of insect-borne plant viruses. Also used for control of insect pests in public health.

Manufacturer: Nanjing Essence Fine-Chemical Co., Ltd

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SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Active ingredient</u>	<u>Content</u>
Lambda-cyhalothrin	2.5%

Emulsifying agent	6.0%
Other solvents added to	100%

SECTION 3. HAZARDS IDENTIFICATION

Eye Contact:	Result in irritant.
Skin Contact:	Contact with skin may result in irritation. The component lambda-cyhalothrin can be absorbed through the skin. Effects of significant exposure may include those described for ingestion. May cause tingling, burning, itching or numbness in exposed areas, that can last up to 36 hours.
Inhalation:	Inhalation of dust may result in respiratory irritation.
Swallowing:	Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain, ataxia, unsteady gait, hyperexcitability, salivation, tremors and incontinence. Large doses may cause convulsions and loss of consciousness. If the victim is uncoordinated there is greater likelihood of vomit entering the lungs and causing subsequent complications.

SECTION 4. FIRST AID MEASURES

Eye Contact:	Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Seek medical assistance.
Skin Contact:	Immediately flush body and clothes with large amounts of water. Remove contaminated clothing and footwear. Lambda-cyhalothrin can be absorbed through the skin with resultant toxic effects.. Wash affected areas with soap and water. Seek immediate medical advice.
Inhalation:	Remove patient to fresh air. Lay down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance immediately.
Swallowing:	Never give anything by mouth to an unconscious person. If swallowed do NOT induce vomiting. For advice, contact the National Poisons Centre (0800 764 766). Seek medical assistance immediately.

SECTION 5. FIRE FIGHTING MEASURES

Fire Fighting Instructions:	Wear full protective clothing and self-contained breathing
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Extinguish Media:

apparatus.

Extinguishing media: Water fog, fine water spray, foam dry agent (carbon dioxide, dry chemical powder).

SECTION 6. ACCIDENTAL RELEASE MEASURES

Firefighting precaution:

Wear protective clothing. Clear area of unprotected personnel. Eliminate all ignition sources and naked lights. Use non-sparking utensils.

Clean-up Procedure:

Sweep or vacuum up solids without generating dust. Dampen down with minimum water spray. Contain liquid spills and absorb with sand, soil or absorbent granules. Do not allow product or washings to enter the waterways or sewer. If spill does enter waterways contact the local authority. Collect in an appropriate sealable labelled container for disposal in an approved landfill.

SECTION 7. HANDLING AND STORAGE

Handling:

Do not store or consume food, drink or use tobacco in areas where there is a potential for exposure to the material.

Storage:

Store in original container in a cool, dry, ventilated place away from direct heat or direct sunlight. Store away from foodstuffs, children and animals. Keep container sealed when not in use.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:

Ensure ventilation is adequate and that air concentrations of components are controlled below recommended hygiene standard. Use with local exhaust ventilation or while wearing dust mask.

Keep containers closed when not in use. Facilities storing or utilising this material should be equipped with an eyewash facility and safety.

Personal Protection:

Wear overalls, safety boots, safety goggles, gloves and NIOSH approved half mask respirator with organic vapour cartridge + dust/mist prefilters. Wash protective clothing before storage or reuse. Wash thoroughly after handling and before eating, drinking or smoking.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Yellow liquid
Content:	2.5%
Suspensability:	95%
PH:	7.2(room temperature)
Water content:	0.5%Max

SECTION 10. STABILITY AND REACTIVITY

Stability:	Stable under room condition.
Reactivity:	In common with many organic chemicals, may form flammable dust clouds in air. May react with oxidizing agents. Product is stable for at least 2 years under ambient storage conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Oral:	Acute oral LD50 (rat) :56-79 mg/kg 19-31mg/kg(mice)
Dermal:	Acute dermal LD50 (rat) 632-696mg/kg
Inhalation:	Acute inhalation LC50(rat):0.06mg/L/4hr(total particulate)
Reproductive:	A three-generation reproductive study in rats fed 0, 10, 30 or 100mg/kg, revealed minor reproductive effects at the highest dose only (reduction in litter sizes and in weight gain of the pups).

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity:	LC50(96h) Rainbow trout 0.36ug/L LC50(96h) Bluegill sunfish 0.21ug/L LC50(96h) Sheephead minnow 0.81ug/L EC50(48h) Daphnia magna 0.36ug/l
Terrestrial Toxicity:	Oral LD50 Mallard duck >3950mg/kg Dietary LC50 Bobwhite quail >7530mg/kg/3d Oral LD50 Bees 38ng/bee Dermal LD50 Bees 909ng/bee
Environmental Fate:	Lambda-cyhalothrin, in common with other synthetic pyrethroids has a high Log Pow. However, since the compound is insoluble in water (thus limiting exposures to aquatic species) and is rapidly metabolised in animal systems the risk of bioaccumulation in an aquatic species is low.

Leaching into ground water through a range of soil types is negligible. In soil it reportedly has a half life of up to 12 weeks.

SECTION 13. DISPOSAL CONSIDERATIONS

Product Disposal: To avoid disposal all attempts should be made to utilise the product completely in accordance with it's registered use. Dilute unusable product according to the label and pour onto fallow land. Prevent the product from entering natural water sources.

Container Disposal: Ensure container is completely empty. Burn empty container if wind direction permits. Otherwise bury in landfill.

SECTION 14. TRANSPORT INFORMATION

Substant name: Pyrethroid pesticide, liquid, toxic, flammable, flash point $\geq 23^{\circ}\text{C}$ (Lambda-cyhalothrin)

UN: 3351,

PG: III

Class: 6.1

Marine Pollutant: Yes

SECTION 15. REGULATORY INFORMATION

Buyer assumes all responsibility for safety and use not in accordance with the product label instructions.

SECTION 16. OTHER INFORMATION

Cleary Chemical Corp. believes that the information and recommendations contained herein are accurate as of the date hereof. The information provided herein applies only to the specific product designated and may not be valid where said product is used in combination with any other material or in any process. It is the users responsibility to determine the suitability of the information for their purposes. No warranty of fitness for any particular purpose, warranty of merchantability, or any other warranty, expressed or implied, is made concerning the information provided.