



SINOCHEM NINGBO LTD.

MATERIAL SAFETY DATA SHEET

SECTION 1. PRODUCTION IDENTIFICATION

Chemical Name: Lambda-cyhalothrin 2.5% EC

Chemical Name of Active Ingredient (IUPAC)

reaction product comprising equal quantities of (S)- α -cyano-3-phenoxybenzyl (Z)-(1R, 3R)-3-(2-chloro-3, 3, 3-trifluoropropenyl)-2, 2-dimethylcyclopropanecarboxylate and (R)- α -cyano-3-phenoxybenzyl (Z)-(1S, 3S)-3-(2-chloro-3, 3, 3-trifluoropropenyl)-2, 2-dimethylcyclopropanecarboxylate or of (S)- α -cyano-3-phenoxybenzyl (Z)-(1R)-cis-3-(2-chloro-3, 3, 3-trifluoropropenyl)-2, 2-dimethylcyclopropanecarboxylate and (R)- α -cyano-3-phenoxybenzyl (Z)-(1S)-cis-3-(2-chloro-3, 3, 3-trifluoropropenyl)-2, 2-dimethylcyclopropanecarboxylate

Chemical Formula of Active Ingredient:

$C_{23}H_{19}ClF_3NO_3$

CAS Registry Number of Active Ingredient:

91465-08-6

Chemical Class: Apyrethroid

Usage: Insecticide

Formulation: Emulsifiable Concentrate

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	Content (% w/w)
Lambda-cyhalothrin	91465-08-6	2.7% min
Other inert ingredients	/	97.3% max

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SECTION 3. HAZARDS IDENTIFICATION

Symptoms of acute exposure

Harmful if inhaled or swallowed. Dust, mist or vapor irritating to eyes and respiratory tract. May cause skin irritation. May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

Hazardous decomposition products

Can decompose at high temperatures forming toxic gases.

Unusual fire, explosion and reactivity hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

SECTION 4. FIRST AID MEASURES

Have the product container, label or Material Safety Data Sheet with you when going for treatment.

Ingestion:

If swallowed, do not give any liquid to the person. Do not induce vomiting unless told to do so by a doctor. Do not give anything by mouth to an unconscious person.

Eye Contact:

If in eyes, hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye.

Skin contact:

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.

Inhalation:

If inhaled, move person to fresh air. If person is not breathing, call an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.

Notes to physician



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There is no specific antidote if this product is ingested.

Treated symptomatically.

Skin contact paresthesia effects (itching, tingling, burning or numbness) are transient, lasting up to 24 hours. Treat symptomatically.

SECTION 5. FIRE FIGHTING MEASURES

Fire and explosion

Flash point:	> 115°F
Flammable Limits (% in Air):	Not available.
Autoignition Temperature:	Not available
Flammability:	The product is a flammable liquid

In case of fire

Use dry chemical, foam or CO₂ extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

SECTION 6. ACCIDENTAL RELEASE MEASURES

In case of spill or leak:

Warning: Flammable vapors may be present. Eliminate sources of ignition and ventilate spill area. Use non-sparking clean-up equipment to prevent vapor ignition.

Control the spill at its source. Contain the spill to prevent it from spreading, contaminating soil, or entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions in the label. Scrub area with hard water detergent. Pick up wash liquid with additional absorbent and place into compatible disposal container.



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SECTION 7. HANDLING AND STORAGE

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingestion

Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye contact

Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Skin contact

Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear. Stringent housekeeping measures are necessary to prevent translocation of the material from contaminated work surfaces to uncontaminated surfaces.

Inhalation

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below exposure limits. A NOISH-certified combination air-purifying respirator with an N, P, or R 95 or HE class filter and an organic vapor cartridge may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by



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air-purifying respirators is limited. Use a pressure demand atmosphere-supplying respirator if there is any potential for uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Light yellow homogenous liquid with some solvent odour

Density:

Not available

Flash point:

> 115°F, the product is a flammable liquid.

Suspensibility:

Not available

Viscosity:

Not available

Wettability:

Not available, since the product is an emulsion.

Storage stability:

The product is stable under normal conditions of warehouse storage.

SECTION 10. STABILITY AND REACTIVITY

Stability: Stable under standard conditions.

Hazardous polymerization: Will not occur

Conditions to avoid: None known

Material to avoid: Oxidizing agents

Hazardous decomposition products: Can decompose at high temperatures forming toxic gases,

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SECTION 11. TOXICOLOGICAL INFORMATION

Lambda-cyhalothrin Technical:

- Oral:** Acute oral LD50 for male rats 79, female rats 56, male mice 19, female mice 31 mg/kg.
- Skin and Eye:** Acute percutaneous LD50 for rats 1293 – 1507 mg/kg. Mild eye irritant; non-irritant to skin (rabbits). Not a skin sensitizer (guinea pigs).
- Inhalation:** LC50 (4 h) 0.06 mg/l air (total particulate).
- NOEL:** (1 y) for dogs 0.05 mg/kg daily
- Others:** Non-mutagenic in the ames test.

SECTION 12. ECOLOGICAL INFORMATION

Lambda-cyhalothrin Technical:

- Birds:** Acute oral LD50 for mallard ducks > 3950 mg/kg. dietary LC50 for quail > 5000 mg/kg. No accumulation of residues in eggs or tissues.
- Fish:** LC50 for bluegill sunfish 0.21, rainbow trout 0.24 µg/l.
- Bees:** LD50 (oral) 38 ng/bee; (contact) 909 ng/bee.
- Daphnia:** LC50 948 h) 0.36 µg/l

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal OSHA and environmental regulations.



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SECTION 14. TRANSPORT INFORMATION

DOT Classification:

Pyrethroid Pesticide, Liquid, Toxic, Flammable, N.O.S. (contains lambda-cyhalothrin),
6.1 (3), UN3351, PGIII

Comments:

International Transportation

Pyrethroid Pesticide, Liquid, Toxic, Flammable, N.O.S. (contains lambda-cyhalothrin),
6.1 (3), UN3351, PGIII

SECTION 15. REGULATOR INFORMATION

EPCRA SARA Title III Classification

Section 311/312 Hazard Classes:	Acute Health Hazard
	Chronic Health Hazard
	Fire Hazard
Section 313 Toxic Chemicals:	Not available

RCRA Hazardous Waste Classification (40 CFR 261)

Not available

TSCA Status

Exempt from TSCA, subject to FIFRA

SECTION 16. OTHER INFORMATION

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The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.