

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

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SUPPLIER NAME:	Shandong Weifang Rainbow Chemical Co., Ltd.
SUPPLIER ADDRESS:	Binhai Economic Development Area, Weifang, Shandong 262737, China
SUPPLIER PHONE:	+507-6613-8266
CHEMICAL NAME	(R)-cyano(3-phenoxyphenyl)methyl (1S,3S)- <i>rel</i> -3-[(1Z)-2-chloro-3,3,3-trifluoro-1-propen-1-yl]-2,2-dimethylcyclopropanecarboxylate
CAS NUMBER	91465-08-6
MOLECULAR FORMULA	C ₂₃ H ₁₉ ClF ₃ NO ₃
MOLECULAR WEIGHT	449.9
CHEMICAL FAMILY	Pyrethroid
USE:	Insecticide

2. COMPOSITION / INFORMATION ON INGREDIENTS

LAMBDA-CYHALOTHRIN	250G/L
OTHER NON HAZARD INGREDIENTS	Up to 1L

3. HAZARDS IDENTIFICATION

SYMPTOMS OF ACUTE EXPOSURE: May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia. Exposure to high vapor levels may cause headache, dizziness, numbness, nausea, incoordination, or other central nervous

SYSTEM EFFECTS: Hazardous Decomposition Products Can decompose at high temperatures forming toxic gases.

4. FIRST- AID MEASURES

GENERAL ADVICE: First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or physician for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

IF INHALED: Remove the affected individual into fresh air and keep the person calm.

IF ON SKIN: Rinse skin immediately with plenty of water for 15 - 20 minutes.

IF IN EYES: Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

IF SWALLOWED: Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting. Have person sip a glass of water if able to swallow.

5. FIRE FIGHTING MEASURES

UNUSUAL FIRE, EXPLOSION AND REACTIVITY HAZARDS:

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

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. Water is used to fight fire, dike and collect runoff.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish

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sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

ENVIRONMENTAL PRECAUTIONS: Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water. A spill of or in excess of the reportable quantity requires notification to state, local and national emergency authorities.

CLEANUP: Dike spillage. Pick up with suitable absorbent material. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION: Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

HAND PROTECTION: Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

EYE PROTECTION: Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

BODY PROTECTION: Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	White Liquid
ODOUR	Characteristic
FLAMMABILITY:	Not flammable.
DENSITY:	1.10 g/cm ³ at 25 °C
PH :	5.0-8.0
EXPLOSIVITY:	Not explosive

10. STABILITY AND REACTIVITY

STABILITY: STABLE: under normal use and storage conditions.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: None known.

MATERIALS TO AVOID: None known.

HAZARDOUS DECOMPOSITION PRODUCTS: Can decompose at high temperatures forming toxic gases.

11. TOXICOLOGICAL INFORMATION

ORAL LD ₅₀ (Rat):	> 2000 mg/kg
DERMAL LD ₅₀ (Rat):	> 2000 mg/kg (male and female)
INHALATION (Rat):	> 8.00 mg/L (4 hr exposure)
EYE IRRITATION (Rabbit):	Moderate irritant
SKIN IRRITATION (Rabbit):	No irritation

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SKIN SENSITIZATION (Rat):

Not a dermal sensitizer

12. ECOLOGICAL INFORMATION

LAMBDA-CYHALOTHRIN TECHNICAL:

Bees LC₅₀/EC₅₀ 0.038 ug/bee

Invertebrates (Water Flea) LC₅₀/EC₅₀ 0.00036 ppm

Fish (Trout) LC₅₀/EC₅₀ 0.00024 ppm

Fish (Bluegill) LC₅₀/EC₅₀ 0.00021 ppm

Birds (8-day dietary - Bobwhite Quail) LC₅₀/EC₅₀ > 5,300 ppm

Birds (8-day dietary - Mallard Duck) LC₅₀/EC₅₀ > 3,948 ppm

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL OF SUBSTANCE: Pesticide wastes are regulated. If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Rinse thoroughly at least three times (triple rinse) in accordance with EPA recommendations. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. TRANSPORT INFORMATION

Reference Bill of Lading

15. OTHER INFORMATION

The data given here is based on current knowledge and experience. The purpose of this safety data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.