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## MATERIAL SAFETY DATA SHEET

### MSDS No: MSDS/LAM/FG-007

## SECTION 1: PRODUCT IDENTIFICATION

<b>Product</b>	Lambdacyhalothrin Technical
<b>Common Name</b>	Lambdacyhalothrin Technical
<b>Intended Use</b>	Insecticide
<b>IUPAC Name</b>	A reaction product comprising equal quantities of (S)- $\alpha$ -cyano-3- phenoxybenzyl (Z)-(1R,3R)-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2- dimethylcyclopropanecarboxylate and (R)- $\alpha$ -cyano-3-phenoxybenzyl (Z)- (1S,3S)-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2- dimethylcyclopropanecarboxylate Roth: (S)- $\alpha$ -cyano-3-phenoxybenzyl (Z)- (1R)-cis-3-(2-chloro-3,3,3-trifluoropropenyl)-2,2- dimethylcyclopropanecarboxylate and (R)- $\alpha$ -cyano-3-phenoxybenzyl (Z)- (1S)-cis-3-(2-chloro-3,3,3- trifluoropropenyl)-2,2- dimethylcyclopropanecarboxylate (1:1)
<b>Manufacturer Name</b>	Bharat Rasayan Limited 1501, Vikram Tower, Rajendra Place New Delhi – 110 008, India +91-11-43661120,1104 Fax -43661100
<b>Emergency Contact NO:</b>	
<b>Chemical Family</b>	Pyrethroid

**Molecular Formula**

$C_{23}H_{19}ClF_3NO_3$

**Molecular Mass**

449.9

## SECTION 2: HAZARDS IDENTIFICATION

**Classification CLP/GHS**

- H 400
- H 330
- H 312
- H 301
- H 410

**Labeling CLP /GHS**



**Signal word: DANGER**

**Other hazards information**

This substance may be hazardous to the environment special attention should be given to water organisms and soil organisms

## SECTION 3: CHEMICAL COMPOSITION

<b>Chemical Name</b>	<b>CAS No.</b>	<b>Content (%w/w)</b>
<b>Lambdacyhalothrin</b>	<b>91465 – 08 – 6</b>	<b>97% Min</b>
<b>Other Ingredient</b>	<b>–</b>	<b>3% Max</b>

## **SECTION 4: FIRST AID MEASURES**

<b>Eyes</b>	Flush eyes with plenty of cold water.
<b>Skin</b>	Wash with plenty of soap and water.
<b>Ingestion</b>	Induce vomiting if swallowed by tickling back of the throat with the finger.
<b>Inhalation</b>	Remove to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.
<b>Note To Medical Doctor</b>	No specific antidote, treat symptomatically

## **SECTION 5: FIRE FIGHTING MEASURES**

<b>Extinguishing Media</b>	Sprayed water jet, foam, extinguishing powder, CO <sub>2</sub> , Sand. Fight fire in early stages if safe to do so.
<b>Well ventilated areas</b>	Full face mask with combination filter, e.g. ABEK-P2 (offers no protection from carbon monoxide!)
<b>Fire Fighting Procedures</b>	Respirator with independent air supply. Contain firefighting water. In the event of fire, the formation of hydrogen chloride, hydrogen cyanide, carbon monoxide, sulphur dioxide and nitrogen oxides must be anticipated.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

<b>Release Notes</b>	Isolate and post spill area. Wear protective clothing and personal protective equipment as prescribed accordingly. Keep unprotected persons and animals out of the area. Keep material out of lakes, streams, and ponds. Large spills should be covered to prevent dispersal. To clean and
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neutralize contaminated area, scrub area with a solution of detergent (e.g. commercial product such as Super soap, Tide or other high pH detergents) and water. Repeat if necessary to remove visible staining. Applying bleach to affected area can make additional decontamination.

## **SECTION 7: HANDLING AND STORAGE**

### **Handling And Storage**

Store in a cool, dry, well ventilated place. Do not use or store near heat, open flames or hot surfaces. Store in original containers only. Keep out of the reach of the children and animals. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Engineering Controls**

No open flames. Prevent deposition of dust. Use closed system, consider use of explosion-proof electrical equipment and lighting. Use local exhaust at all process locations. Ventilate all transport vehicles prior to unloading

### **Eyes And Face**

For protection against exposure, wear chemical protective goggles or a face shield.

### **Respiratory**

For protection against exposures wear, as a minimum, a properly fitted half – face or full face air purifying respirator, which is approved for pesticides (U.S. NIOSH/MSHA, EU CEN or comparable certification organization). Respirator use and selection must be based on airborne concentration

### **Protective Clothing**

Depending upon concentration encountered, wear coveralls or long – sleeved uniform and head covering. For larger exposures as in the case of spills, wear full body cover barrier suit, such as a PVC SUIT. Leather items – such as shoes, belts and watchbands – that become contaminated should be removed and destroyed. Launder all work clothing before reuse (separately from household laundry).

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Solidified melt
<b>Colour</b>	Colorless to pale yellow color
<b>Solubility in Water</b>	0.005 mg/l, 20°C
<b>Vapour Pressure</b>	$2 \times 10^{-4}$ mPa

## SECTION 10: STABILITY & REACTIVITY

Stable under normal temperatures and pressures.

Avoid exposure to high moisture and excessive heat conditions for prolonged period. Alkaline materials such as lime, lime sulphur and Bordeaux mixture decrease the fungicidal activity of the product.

## SECTION 11: TOXICOLOGICAL INFORMATION

<b>Acute Oral LD50</b>	200 mg/kg bw.
<b>Acute Dermal LD50</b>	>2000 mg/kg
<b>Acute Inhalation LC50</b>	1 mg/l air
<b>Skin irritation</b>	Non irritant
<b>Eye irritation</b>	Mild irritant
<b>Skin sensitization</b>	Not a sensitizer

## SECTION 12: ECOLOGICAL INFORMATION

<b>Toxicity to Quail (MLD)</b>	>5300 mg/kg
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**Toxicity to Bee (LD50)** 909 ng/bee

**Toxicity to Fish (LC50)** 0.36 µg/l

**Toxicity to Daphnia** 0.36 µg/

## SECTION 13: DISPOSAL CONSIDERATIONS

### Disposal Method

Open dumping or burning of this material or its packing is prohibited. If spilled material cannot be disposed of by use according to label instructions, an acceptable method of disposal is to incinerate in accordance with local, state and national environmental laws, rules, standards and regulations. However, because acceptable methods of disposal may vary by location and regulatory requirements may change, the appropriate agencies should be contacted prior to disposal

### Empty Container

Completely empty package into application equipment then dispose of empty package in accordance with all Federal, State and local regulations.

## SECTION 14: TRANSPORT INFORMATION

### ADR/RID Classification:

**Proper shipping Name** Environmentally Hazardous Substance, liquid, toxic, N.O.S (Contains Lambdacyhalothrin)

**UN No.** 3352

**Packing Group** III

**Hazard Class** 6.1

### IMDG Classification:

**Proper shipping Name** Environmentally Hazardous Substance, liquid, toxic, N.O.S (Contains Lambdacyhalothrin)

**UN No.** 3352

**Packing Group** III

**Hazard Class** 6.1  
**Marine pollutant** Marine pollutant

**IATA/ICAO Classification:**

**Proper shipping Name** Environmentally Hazardous Substance, liquid, toxic, N.O.S (Contains Lambdacyhalothrin)  
**UN No.** 3352  
**Packing Group** III  
**Hazard Class** 6.1

**SECTION 15: REGULATORY INFORMATION**

**Classification CLP/GHS**

- H 400
- H 330
- H 312
- H 301
- H 410

**Labeling CLP /GHS**



**Signal word: DANGER**

**Other hazards information**

This substance may be hazardous to the environment special attention should be given to water organisms and soil organisms

### Risk Phrase

**R21** Harmful in contact with skin

**R25** Toxic if swallowed

**R26** Very toxic by inhalation

### Safety Phrase

**S1/2** Keep locked up and out of the reach of children

**S28** After contact with skin, wash immediately with plenty of water

**S36/37/39** Wear suitable protective clothing, gloves and eye/face protection

**S38** In case of insufficient ventilation wear suitable respiratory equipment

**S45** In case of accident or if you feel unwell seek medical advice immediately

**S60** This material and its container must be disposed of as hazardous waste

**S61** Avoid release to the environment. Refer to special instructions/safety data sheet



## **SECTION 16: OTHER INFORMATION**

The information provided in this MSDS is of general nature not specific for a particular purpose or situation, and believed to be correct and faithful. **Bharat Rasayan Limited** does not make any warranty or guarantee of any kind regarding fitness or completeness of information. **Bharat Rasayan Limited** disclaims any liability to the result(s) obtained or arising out of any use of the product or reliance on data/information contained in this MSDS.

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**Prepared by: Bharat Rasayan Limited: EHS Department**

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