

MATERIAL SAFETY DATA SHEET**LAMBDA – 10 WP (LAMBDA-CYHALOTHRIN 10% WP)****1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND SUPPLIER**

PRODUCT NAME	:	LAMBDA-CYHALOTHRIN 10 % WP
CHEMICAL GROUP	:	Synthetic Pyrethroid
RECOMMENDED USE	:	A liquid insecticide for public health
FORMULATION	:	Wettable Powder
CORPORATE ADDRESS	:	Arbuda Agrochemicals Pvt. Ltd. 1104, Ruby Crescent Business Boulevard, Ashok Chakravarti Road, Kandivali - East, Mumbai-400101, Maharashtra, India Customer Care No- +91 9076907642 Email - info@arbudaagrochemicals.com
MANUFACTURER ADDRESS	:	Arbuda Agrochemicals Pvt Ltd Plot No-281-283, GIDC, Taluka- Talod, District-Sabarkantha, Gujarat- 383215.

2. COMPOSITION / INFORMATION ON INGREDIENTS**MOLECULAR**

FORMULA	:	$C_{23}H_{19}ClF_3NO_3$
CAS No.	:	91465-08-6
UAN NUMBER	:	2588

3. HAZARDS IDENTIFICATION

Lambda - cyhalothrin is a Pyrethroid insecticide. It is a moderately toxic material.

Lambdacyhalothrin is a non-systemic insecticide with contact and stomach action and repellent properties.

Gives rapid knockdown and long residual activity.

WHO Classification: II (Moderately Hazardous)

Lambda-cyhalothrin is toxic if ingested or breathed; it is mildly irritating to eyes and slight irritant to skin. It is not a skin sensitizer.

4. FIRST AID MEASURES

If poisoning is suspected, do not wait for symptoms to develop. Call a doctor, clinic or hospital immediately. Explain that the victim has been exposed to Lambda-cyhalothrin, a Synthetic Pyrethroid, and describe his/her condition. Move victim immediately from the area where Lambda-cyhalothrin is present.

INGESTION : Call for medical attention urgently. Do not induce vomiting or give liquids.

Vomiting should be induced only under professional supervision. Never give anything by mouth to an unconscious person. Make the exposed lie down and keep him warm and calm. Gastric lavage is to be applied and medical grade activated carbon given to the patient. Keep respiratory and heart functions under observation and control.

INHALATION : Remove the victim to fresh air. If breathing stops, provide artificial respiration. Call for medical attention.

EYES : Flush eyes immediately with plenty of water for at least 15 minutes, lifting the upper and lower eyelids intermittently. Get medical attention immediately.

CONTACT / SKIN AND EYES :-

In case of contact with product, wash immediately skin area with plenty of water and soap. Speed in removing material from skin is extremely important. Remove and isolate contaminated clothing and shoes. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

FIRE EXTINGUISHING MEDIA : Dry chemical CO₂, Alcohol foam.

HAZARDOUS DECOMPOSITION PRODUCTS : When heated to decomposition it emits very toxic fumes of CO, CO₂, CL, NO₂ and CN.

SPECIAL FIRE FIGHTING PROCEDURES : Wear protective equipment and breathing apparatus. Direct water onto intact containers to keep them cool. Call fire brigade immediately.

6. ACCIDENTAL RELEASE MEASURES

PERSONNEL PRECAUTIONS :- Keep unnecessary people away. Isolate hazard area and deny entry. Do not smoke & Avoid contact and inhalation of closed space before entering.

PRECAUTIONS FOR THE ENVIRONMENT: - Avoid dispersion. Isolate discharged material and keep material out of water sources. Prevent product from entering drains. Do not graze or feed clippings from treated areas to livestock.

METHODS FOR CLEANING UP: - Wear protective equipment. Small spillages: absorb on inert absorbing material. Shovel up into covered containers for disposal.

Large spillages:

Should be dammed-off and pumped into containers; soak up remainder with absorbent material and dispose of in accordance with local regulations as per method outlined in section 13, "Disposal considerations".

NEUTRALIZATION PROCEDURE: - To clean and neutralize the spill area, tools and equipment's, wash a suitable solution of caustic / soda ash and an appropriate alcohol (methanol, ethanol or a strong soap isopropanol). Follow this by washing with and water solution. Shovel all waste material into a drum and

Label contents for disposal. Dispose of drummed waste according to the method outlined, Disposal in section 13, Considerations.

PERSONAL PROTECTION: Wear suitable chemical protective clothing, boots, natural rubber gloves, goggles and respiratory protective mask.

7. HANDLING AND STORAGE

HANDLING:

General precautions: Do not smoke, drink, or eat during handling. Wash hands using liquid detergent. Wear protective clothing to avoid contact and/or inhalation with the product. Eliminate all sources of ignition from areas where the material is handled or used. Good personal hygiene procedures must be practiced. Specific conditions: Good local exhaust ventilation. Full face protective mask.

STORAGE:

The packages containing the insecticide shall be stored in separate room or premises away from the rooms or premises used for storage of the food articles or shall be kept in separate almas under lock and key depending on the quantity and the nature of the insecticide.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTION:

VENTILATION: - General air replacement or dilution ventilation is sufficient for material handling and storage but local ventilation should be used when removing this product from containers. Ventilate all transport vehicles prior to unloading.

PERSONAL HYGIENE: - Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking or using tobacco. Shower at the end of the workday.

WORK CLOTHING: Depending upon concentrations encountered, wear coveralls or long sleeved uniform and head covering. For larger exposures as in the case of spills, wear full body cover suit, such as rubber rain suit, Leather items such as shoes. Belts and watchbands that become contaminated should be removed and hold destroyed. Launder all work clothing before refuse (separately from house laundry).

RESPIRATORY PROTECTION :- For splash, mist, vapor or dust exposure 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 concentrations.

EYE PROTECTION: For splash, mist vapor or dust exposure wear chemical protective goggles as a face shield.

GLOVES: Wear chemical protective gloves made of materials such as rubber, neoprene, or PVC. Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

9. PHYSICAL AND CHEMICAL PROPERTISE

Appearance	:	Off white to light brown
Odour	:	Mild characteristic
Boiling point	:	Not applicable
Melting point	:	Not Applicable
Vapour pressure	:	2×10^{-4} mpa (20 °C)
Density	:	0.33 to 0.35g/ml (25 °C)
Water Solubility	:	0.005 mg/l (pH 6.5)

10. STABILITY AND REACTIVITY

STABILITY	:	Stable.
CONDITIONS TO AVOID	:	Exposure to flames may emit toxic fumes upon decomposition
MATERIALS TO AVOID	:	Alkaline conditions, avoid strong oxidants.

HAZARDOUS DECOMPOSITION PRODUCTS:

COMBUSTION PRODUCTS : Thermal decomposition products may be hazardous CO₂,CN, NO_x, CL

11. TOXICOLOGICAL INFORMATION

ROUTES OF EXPOSURE: - Contact with skin, eyes and inhalation. Ingestion is easy to prevent and not frequent. If it occurs, it may be dangerous. Synthetic Pyrethroid, moderately hazardous.

ACUTE TOXICITY:

LD50 Oral-rat (male) : 228 mg/kg bw
(Female) : 274 mg/kg bw

LD50 Oral-mice : 35 mg/kg bw

LD50 dermal-rat : > 5000 mg/kg bw

LC50 Inhalation –rat : 0.59 mg/L air (4 hours)

Eye irritation : Slightly irritant (rabbits)

Skin irritation : Mildly irritating (rabbits)

Skin sensitization : Not a skin sensitizer. (Guinea pig)

Chronic effects form overexposure : In two-year studies with rats, lambda-cyhalothrin did not cause reproductive toxicity or teratogenicity. There were no observable changes in the function or structure of the liver or nervous system. In a cytogenetic assays and chromosomal structural aberration tests, the results indicated nongenotoxic mutagenic or effects by lambda-cyhalothrin.

Carcinogenicity: IARC : No NTP : No Others (OSHA) : No

12. ECOLOGICAL INFORMATION

In soil, Leaching of lambda-cyhalothrin (technical) and its degradation products through a range of soil types is negligible:

Effect On Aquatic Organisms:

Acute LC50 (96 hours) Bluegill sunfish : 0.21 mg/l (a.i.)
 Rainbow trout : 0.24 mg/l (a.i.)
 Fresh water fish : 4.2 mg/l (tech.)

Daphnia magna 48 hours EC50 : 0.36 mg/l (a.i.)

Effect On Birds:

Acute oral LD50 for

Chicken : > 5000 mg/kg (tech.) Pigeons : >5000
mg/kg (tech.) Mallard ducks : > 3950 mg/kg (a.i.)
Quail : > 5300 mg/kg 9a.i.)

Effects on bees : **Acute LD50 (contact) : 909 ng/bee (oral) : 38 ng/bee**

13. DISPOSAL CONSIDERATION

Open dumping or burning of this pesticides or its packaging is prohibited. If spilled material cannot be disposed of by use according to the label instructions. An acceptable method of disposed of disposal is to incinerate in accordance with local, state and national laws and regulations. However, because acceptable methods of disposal may vary by location and regulatory requirements may change, the appropriate regulatory agencies should be contacted prior to disposal. Non- returnable containers which held these pesticides should be cleaned, prior to disposal by triple-rinsing. Containers which held this material may be cleaned by being triple rinsed and recycled. With the rinsate being incinerated. Do not cut or weld metal containers. Vapours that form may create an explosion hazards.

14. TRANSPORT INFORMATION

Pesticides, solid, toxic, n.o.s., UN Class 6.1, ERG Guide55 MARPOL

Designation: Severe Marine pollutant (lambda - cyhalothrin 10 %) Resportable Quantity : Not listed.

Insecticides, NOI, Poison other than class a poison.NMFC

Item 102100. Lambda - cyhalothrin.

SPECIAL PRECAUTIONS: Stable at room temperature and during transport. Transportin properly sealed and labelled containers.

15. REGULATORY INFORMATION

Australian Hazarad Code	:	3 X E
U.S.CERCLA Resportable Quantity (RQ)	:	Not listed
U.S. EPA Signal word	:	WARNING
CLASSIFICATION	:	LABELLING: SYMBOLS : T, Xn, Xi

PHRASES R:

R10 : Flammable

R22 : Harmful if swallowed R23: Toxic by Inhalation.

R36/38 : Irritating to the eyes and skinR50: Very toxic to aquatic organisms.

PHRASES S:

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

S13 : Keep away from food, drink and animal feeding Staffs.

S20/21 : When using do not eat, drink or smoke.

S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.S28 : After contact with skin, wash immediately with plenty of water and soap.

S36/37/39 : wear suitable protective clothing, gloves and eye/ face protection.

16) OTHER INFORMATION**MSDS PREPARATION DATE** **01.03.2024****REVISION DATE** **28.02.2026**

The information contained in this safety data sheet is given in good faith. It is accurate to the best of our knowledge and belief and represents the most up to Date information. The information given in this data sheet does not constitute or Replace the user's own assessment or work risk as required by other health and Safety legislation.