

Material Safety Data Sheet



LambdaStar 9.7CS

Effective Date : July 7, 2011

1. CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification: Lambdastar 9.7%CS

Active ingredient: Lambda-cyhalothrin [1 α (S), 3 α (Z)] -(±)cyano(3-phenoxyphenyl)methyl-3-(2-chloro-3,3,3-trifluoro-1-proenyl)-2,2-dimethylcyclopropanecarboxylate

Company Identification

Manufacturer/ Distributor

LG Life Sciences Ltd.(Head Quarter)

LG Gwanghwamun Bldg.

92, Simunno 2-ga, Jongno-gu, Seoul, 110-062, Seoul, Korea.

Product Information & Transport Emergency

1-201-816-2310

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Components</u>	<u>CAS Number</u>	<u>%</u>
Lambda-cyhalothrin (PP321 Technical)	91465-08-6	9.7%
Other ingredients*		91.6%

*Ingredients not precisely identified are proprietary or non-hazardous.

3. HAZARDS IDENTIFICATION

Emergency Overview

Warning! May be fatal if swallowed. Harmful if inhaled. Do not get in eyes, on skin, or on clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, clothing and wash clothing before reuse. For medical emergencies involving this product, call toll free 1-800-441-3637.

Potential Health Effect:

Ingestion:

This material is classified as "moderately toxic" by ingestion.

Material Safety Data Sheet

(HAZARDS IDENTIFICATION – Continued)

Skin contact:

This material is mildly irritating in rabbit dermal irritation studies. Short contact periods with human skin will probably not produce irritation. Irritation can develop following repeated and/or prolonged contact with human skin. This material was a skin sensitizer in animal testing. Skin sensitization and irritation may develop after repeated and/or prolonged contact with human skin.

Eye contact:

A 2% v/v spray strength dilution was tested using three rabbits. No corneal or iridial effects. Slight irritation may occur following exposure to this material.

Skin absorption:

Systemically toxic concentrations of this product will not be absorbed through human skin.

Inhalation:

Particulates of this material will probably irritate respiratory passages.

Other effects of overexposure:

Studies using laboratory animals exposed to high levels of the active ingredient lambda-cyhalothrin have shown that lambda-cyhalothrin may induce neurotoxic effects such as staggering gait, muscle tremors and convulsions.

4. FIRST AID MEASURES

First Aid

IF SWALLOWED: Call poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth to mouth, if possible. Call a poison control center or doctor for further treatment advice.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact the Poison Control Center 800-222-1222.

Material Safety Data Sheet

(FIRST AID MEASURES – Continued)

Notes to Physicians

If on skin, after drying apply vitamin E cream or oil if available. If available. If not available, apply vegetable oil liberally over painful areas. The oil or cream may be used repeatedly until relief is achieved.

Contains xylene range aromatic solvent – vomiting may cause aspiration pneumonia.

5. FIRE FIGHTING MEASURES

Flammable Properties

Flash Point:	Not applicable
Autoignition temperature:	No data
Flammable limits (STP):	Not applicable

Extinguishing Media

Water Spray, Water Fog, Dry Chemical, CO2

Fire Fighting Instructions

Evacuate personnel to a safe area. Wear self contained breathing apparatus. Wear full protective equipment. Use water spray. Cool tank/container with water spray.

6. ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Spill Clean Up

In case of spill or leak, soak up with sand, earth or synthetic absorbent (do not use alkaline absorbents) and dispose of wastes in compliance with local, State and Federal regulations.

Accidental Release Measures CAUTION – COMBUSTIBLE!

LARGE SPILLS: Eliminate potential source of ignition. Wear appropriate respirator and other protective clothing. Shut off source of leak only if safe to do so. Dike and contain. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand, or other suitable material; place in non-leaking containers and seal tightly for proper disposal. Flush area with water to remove trace residue; dispose of flush solution as above.

SMALL SPILLS: Take up with absorbent material and place in non-leaking containers for proper disposal. Do not use alkaline absorbent.

Material Safety Data Sheet

7. HANDLING AND STORAGE

Handling (Personnel)

Do not get in eyes, on skin, or on clothing. Avoid breathing vapors or mist. Wash thoroughly after handling. Wash clothing after use. Discard shoes if contaminated. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Storage

Do not contaminate water, food, or feed by storage.

Store in a secure, dry and temperate area. Store in original container. Keep container closed when not in use. Do not store near food or feed. Do not use or store around the home. Avoid contact with water. Shake well before use. Protect from freezing. In case of spill or leak, soak up with sand, earth or synthetic absorbent (do not use alkaline absorbents) and dispose of wastes in compliance with local, State and Federal regulations.

8. EXPOSURE CONTROLS / PERSON PROTECTION

Engineering Controls:

Use only with adequate ventilation. Keep container tightly closed.

Ventilation:

Provide general and/or local exhaust ventilation to control airborne concentrations.

Respiratory Protection:

Not normally needed for this product when diluted in water for end-use application. When needed, use MSHA/NIOSH approved respirator for pesticides.

Protective Clothing:

Skin contact should be prevented through the use of impervious gloves, long-sleeved shirts and long pants. Remove contaminated clothing and wash before re-wearing. Wash separately from other laundry.

Eye Protection:

Eye contact with the material should be avoided through the use of chemical safety glasses, goggles or a face shield, selected in regard to exposure potential.

Other Protective Equipment:

An adequate supply of clean potable water should be available to allow thorough flushing of the skin and eyes in even of contact with this material.

Material Safety Data Sheet

(EXPOSURE CONTROLS / PERSON PROTECTION – Continued)

Exposure Guidelines

Applicable Exposure Limits:

Lambda-cyhalothrin

PEL (OSHA) None established

TLV (ACGIH) None established

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Appearance and odor : White liquid, mild chemical odor
pH : 4.19
Specific gravity : 8.32lbs/gal
Viscosity : 1,500 centipoises at 20rpm using a #2 spindle @24C

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal temperatures and storage conditions.

Conditions To Avoid: Store away from flammable materials and sources of heat or flame.

Incompatibility: Oxidizing agents, alkalis, calcium hypochlorite

Hazardous Decomposition Products: Combustion products: Carbon dioxide, carbon monoxide. Nitrogen oxides, ammonia, cyanuric acid, biuret. Halogen, halogen acids, possible trace amounts of carbonyl halide.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Animal Data

Oral LD50: > 300 mg/kg in male rats (Moderately toxic)
Dermal LD50: > 2000 mg/kg in rabbits (Slightly toxic)
Inhalation 4 hour LC50: > 2.2 mg/l in rats (Slightly toxic)

LambdaStar 9.7CS is a slight eye irritant, but is not a skin irritant or skin sensitizer in animal tests.

Material Safety Data Sheet

12. ECOLOGICAL INFORMATION

Lambda-cyhalothrin

Aquatic Organisms

Species	LC50 ppm (ug/L)
Rainbow trout (96 hr)	0.24
Daphia (72hr)	0.36
Algae (96 hr)	>1000

Honey bees

Test	48-h LD50
Oral	909 ng/bee
Contact	38 ng/bee

13. DISPOSAL CONSIDERATIONS

Waste Disposal

Do not contaminate water, food, or feed by disposal.

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when cleaning equipment or when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops if bees are visiting the treatment area.

Container Disposal

Triple rinse (or equivalent), then offer for recycling or reconditioning if container reuse is permitted. If container reuse is prohibited, puncture metal containers and dispose of in a sanitary landfill, or by other approved State and local procedures. Dispose of plastic containers in a sanitary landfill, or by incineration if allowed by State and local authorities. If burned, stay out of smoke.

Material Safety Data Sheet

14. TRANSPORTATION INFORMATION

Shipping Information

DOT CLASSIFICATION:

Non-bulk: Not regulated and requires no markings, labels, or placards.

(Note: Combination packages with inner packages less than 5 liters may be re-classified as Consumer Commodities (ORM-D). These packages cannot be shipped by air freight.)

Bulk: UN3082, Environmentally hazardous substance, liquid, n.o.s.
(lambdacyhalothrin), 9, PGIII, marine pollutant

(Note for bulk shipments: If labeled or placarded properly, no marine pollutant marking is required)

INTERNATIONAL TRANSPORTATION:

IMO (vessel): UN3082, Environmentally hazardous substance, liquid, n.o.s.
(lambdacyhalothrin), 9, PGIII, marine pollutant

IATA (air): UN3082, Environmentally hazardous substance, liquid, n.o.s.
(lambdacyhalothrin), 9, PGIII, marine pollutant

15. REGULATORY INFORMATION

U.S. Federal Regulations

TSCA (Toxic Substances Control Act) Regulations, 40CFR 710:
This product is a pesticide and is exempt from TSCA regulation.

CERLA and SARA Regulations (40 CFR 355, 370, and 372):
This product does not contain any chemicals subject to the reporting requirements of SARA Section 313

Other Determined Regulations:
EPA Reg. No.: 53883-XXX

Other Information:
We assigned NFPA and HMIS ratings to this product based on the hazards of its ingredient(s). Because the customer is most aware of the application of the product, he must ensure that the proper personal protective equipment (PPE) is provided consistent with information contained in the product MSDS.

Material Safety Data Sheet

16. OTHER INFORMATION

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.