

# Safety Data Sheet

**LambdaStar**

**SDS: 5/7/15**

## Section 1 – Chemical Product and Company Identification

**Product Name:** LambdaStar

**CAS #** 91465-08-6

**EPA Reg. #:** 71532-20-91026

**Product Use:** Restricted Use Insecticide

\* Contain Petroleum Distillates

**Company Identification:** LG Life Science America Inc.  
910 Sylvan Avenue  
Englewood Cliffs, NJ 07632

**Emergency call:** 201-816-2310

**Chemtrec call:** 800-424-9300

## Section 2 – Hazards identification

**Classification of substance:**



Fatal if swallowed

Toxic to aquatic life with long lasting effects

Cause serious eye damage

Highly Flammable liquid and vapor

**GHS labeling elements:**

The substance is classified and labeled according to the Globally Harmonized System (GHS):

**Hazard pictograms:**



GHS06

GHS09

GHS05

GHS02

**Signal Word:** Danger

**Hazard-determined components of labeling:** Lambda-cyhalothrin

**Hazard statements:**

Fatal if swallowed

Very Toxic to aquatic life with long lasting effects

Cause serious eye damage

Highly Flammable liquid and vapor

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**Precautionary Statements:**

**Prevention:** Avoid breathing dust/fume/gas/mist/vapour/spray.

Avoid release to the environment

Keep away from heat/spark/open flames/hot surfaces.

No Smoking

Keep Container tightly closed

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting

Use only non-sparking tools

Take precautionary measures against static discharge.

Wear protective gloves/eye protection/face protection

**Response:**

**If in Eye:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**If on Skin:** Take off immediately all contaminated clothing. Rinse skin with water. If skin irritation occurs seek medical advice/attention.

**If Inhaled:** Remove person to fresh air and keep at rest in a position comfortable for breathing. Wash contaminated clothing before reuse. Call a poison center or doctor/physician if you feel unwell.

**In case of Fire:** Use dry powder, foam or carbon dioxide. 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 building, area and equipment until decontaminated. Runoff can cause environmental damage. If water is used to fight fire, build a dike and collect runoff.

**If Swallowed:** Rinse mouth and Do not induce vomiting. Immediately call a Poison Center/doctor.

**Other effects of overexposure:** High levels of the active ingredient lambda-cyhalothrin may induce neurotoxic effects such as staggering gait, muscle tremors and convulsions.

**Storage:** Store in a well-ventilated place. Keep cool.

**Disposal:** Dispose of contents and containers in accordance with local, regional, federal and international regulations.

**NFPA Grade (0-4 level):** Health: 2, Flammability: 3, Reactivity: 0

**HMIS Grade (0-4 level):** Health: 2, Flammability 3, Reactivity: 0

## Section 3 – Composition/information of ingredient

| Chemical Name      | Trade names and Synonyms  | Percent | CAS No.    |
|--------------------|---|---------|------------|
| Lambda-cyhalothrin | Lambda-cyhalothrin:[1a(S),3a(Z)]-(±)cyano(3-phenoxyphenyl)methyl-3-(2-chloro-3,3,3-trifluoro-1-proenyl)-2,2-dimethylcyclopropanecarboxylate | 13.1%   | 91465-08-6 |
| Other Ingredients  | Non-Toxic and non-hazardous*  |         |            |
|                    | Petroleum Solvent*  |         |            |
|                    | 1,2,4-Trimethylbenzene*   |         |            |

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|  |                |  |  |
|--|----------------|--|--|
|  | Ethyl Benzene* |  |  |
|  | Xylene*        |  |  |

\*Proprietary components

## Section 4 – First Aid Measures

|             |   |
|-------------|---|
| Symptoms    | Exposure to Lambda-cyhalothrin may cause a skin sensation called paresthesia, which is usually described as tingling, itching, burning, prickling, glowing, flushing, numbness or a chapped feeling. Exposure to high vapor levels may cause headache, dizziness, numbness, nausea, incoordination, or other central nervous system effects. Contains petroleum distillate- vomiting may cause aspiration pneumonia. High levels of the active ingredient lambda-cyhalothrin may induce neurotoxic effects such as staggering gait, muscle tremors and convulsions. |
| Swallowed:  | Call a poison control center or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by the poison control center or doctor. Rinse mouth with water immediately. Contain xylene range aromatic solvent- vomiting may cause aspiration pneumonia.  |
| Eyes:       | May cause irritation do not rub eyes. Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.   |
| Skin:       | Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes.   |
| Inhalation: | May cause irritation. Remove to fresh air. If person stops breathing or irregular, give artificial respiration and supply oxygen.   |

### Note to Physicians

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. Notify medical personnel of contaminated situations and have them take appropriate protective measure. IF on skin, after drying apply vitamin E cream or oil if available. If not available, apply vegetable oil liberally over painful areas. The oil or cream may be used repeatedly until relief is achieved.

## Section 5 – Fire Fighting Measure

**Extinguishing media:** Use dry powder or sand, carbon dioxide, water fog, foam, halogenated agents, or appropriate surrounding fire and materials. Avoid use of water jets for extinguishing. Using dry chemical, foam or carbon dioxide extinguishing media.

**Fire and Explosive Hazards:** Flammable liquid. Can lease vapors that form explosive mixtures at temperatures at or above the flash point. Possible toxic smoke, vapor, fallout and runoff water can result from

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fires depending on extent of combustion and presence of other combustible materials. Contaminated buildings, areas and equipment must be properly decontaminated before reuse. Heavy vapor can flow along surfaces to distant ignition sources and flash back. During Fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

**Special fire fighting procedures:** Fireman should wear self-contained breathing apparatus with full facepiece, complete fire protection clothes and shoes. Do not access if tank is on fire. Use water to cool exposed containers to extinguish fire. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Avoid inhalation of materials or combustion by-product. Vapor or gas is burned at distant ignition sources can be spread quickly. 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. If water is used to fight fire, build a dike and collect the runoff.

**Reference to other sections:**

See Section 10 for decomposition products.

## Section 6 – Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:** Wear approved respiratory protection, chemically compatible gloves and protective clothing. Keep unprotected persons away. Allow work against the wind and remove all people upwind. Do not direct water at spill or source leak. Use adequate ventilation to prevent inhalation. Prevent use of contaminated building, area, and equipment until decontaminated.

**Environmental precautions:** Harmful to aquatic organisms. Prevent runoff and contact with sources of water including but not limited to drains, sewers, lakes and ponds. In case of large spill, inform the relevant authorities.

**Methods and material for containment and cleaning up:**

**In case small leak or spill:** contain material using sand or other non-combustible, let absorb, and dispose as waste. Don't contaminate any body of water. Sweep up material, place in a bottle, and hold for waste disposal. Do not use alkaline absorbent. Rinse with a small amount of water and use absorbent to collect the wash solution. Scrub the area with hard water detergents. Absorb any excess liquid as indicated above, and add to the disposal container. Seal drum and dispose of contaminated material in a facility permitted for hazardous waste. Large spills should be handled according to spill plan. Otherwise, in case of emergency call, day or night, 800-424-9300, Chemtrec.

**In case large leak or spill:** Stay upwind and keep out of low areas. Prevent from contaminating waterways. Dispose of waste in accordance with local regulation. 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. Inform the relevant authorities when emission at least standard amount.

**Reference to other sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

## Section 7 – Handling and Storage

### Handling

**Precautions for safe handling:** Avoid direct physical contact. Do not inhale the steam prolonged or repeated. Use product only in well-ventilated place. Do not inhale the steam prolonged or repeated. Users should wash hands before eating and drinking. Do not contaminate water, food, or feed by storage. Since emptied containers retain product residue (vapor, liquid, solid) follow all MSDS and label warnings even after container is empty. Keep protective respiratory device available.

### Conditions for Safe Storage, including any incompatibilities

**Storage:** Do not contaminate water, food, or feed by storage. Store in original container only. Avoid direct sunlight. Do not apply physical shock to container. Store in a secure, dry and temperate area. Keep container closed when not in use. Avoid contact with water. Shake well before use.

**Requirements to be met by storerooms and receptacles:** Store out of sun in cool place. Do not store near food or feed. Do not use or store around the home. Protect from freezing.

### Reference to other sections:

See Section 10 for incompatibilities

See Section 6 for accidental release measure

## Section 8 – Contact Controls and Personal Protection

**Max allowed concentration:** No Data

**Way of measurement:** No Data

**Engineering Control:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep risk of inhalation low. Take safety shower after handling 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. The manufacturer of the solvent recommends an exposure limit of 50 ppm as an 8-hr TWA.

### Personal Protection

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

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles such as splash resistant safety goggles with a secondary protection faceshield. Provide an emergency eye wash station and quick drench shower in the immediate work area.

**Body:** Wear appropriate chemical resistant overalls and rubber boots and rubber gloves. Avoid any skin exposure. Wash separately from other laundry.

**Hands:** Wear appropriate gloves, such as barrier laminate or Viton  $\geq$  14mils.

**General protective and hygienic measures:** Discard clothing other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Wash contaminated clothing before reuse. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. No smoking,

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eating or drinking during handling. Change to clean clothes after washing.

**Other conditions:** When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

## Section 9 – Physical and Chemical Properties

### Information on basic physical and chemical properties

#### General Information:

**Appearance and Physical State:** Fluid (EC based on water), mild odor

**Color:** slightly yellow

**pH Value:** 4.95 in an aqueous solution

**Viscosity:** Not available

**Vapor Pressure (25 °C):** Not available

**Melting point:** Not available

**Boiling Point:** Not applicable

**Specific Gravity:** 0.922 g/cc @ 25°C

**Comparative concentration (water: 1):** Not available (not required for end use)

**Quantity of heat in burning (KJ/mol):** Not available (not required for end use)

**Density (g/cm<sup>3</sup>):** Not available

**Critical pressure (Mpa):** Not available

**Critical temperature:** Not available

**Flash point (C):** 46 °C

**Flammable Limits:** Lower: 1.1%      Upper: 6.1%

**Autoignition Temperature:** Not available

**Burning temperature (C):** Not available

**Explosion:** Not available

Partition Coefficient: Log Pow = < 0.000 (active ingredient)

**Solubility:** Suspendable in water and emulsifiable

## Section 10 – Stability and Reactivity

**Chemical Stability:** This material is stable at the normal storage conditions.

**Incompatible to Avoid:** Strong acidic, Oxidizing agents, Calcium Hypochlorite, and alkali materials should be avoided.

**Conditions to Avoid:** Avoid accumulation of heating, electrostatic charges, flames, and hot surface.

**Decomposition Products:** Combustion products; Carbon dioxide, carbon monoxide. Nitrogen oxides, ammonia, cyanuric acid, biuret, halogen, halogen acids, possible trace amounts of carbonyl halide. Can decompose at high temperatures forming toxic gas.

**Hazardous Polymerization:** Will not occur

**Reference to other sections:**

See Section 5 for static discharge potential

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## Section 11 – Toxicological Information

### Acute Toxicity:

#### LD/LC50 values that are relevant for classification:

**Oral:** LD<sub>50</sub> : 110 mg/kg

**Inhalation:** LC<sub>50</sub>: 0.175mg/L

**Dermal:** Not available at this time

**Eyes:** Severely Irritant

**Skin Sensitization:** Moderate sensitizer

#### Primary irritant effect:

**If swallowed:** Fatal if swallowed

**On eyes:** Minimally irritating to the eye

**On the skin:** Slight irritating to skin. Irritation can develop following repeated and/or prolonged contact with human skin.

**Respiratory sensitization:** Single exposure to dust is not likely to be hazardous. Vapors are unlikely due to physical properties.

**Skin Sensitization:** Product is considered a contact sensitizer.

**Germ Cell Mutagenicity:** The chromosome aberration test was negative.

**Carcinogenicity:** This product has negative Ames test results.

**Reproductive Toxicity:** Not available

**STOT-Single Exposure:** Not available

**STOT-Repeated Exposure:** Not available

**Aspiration Hazard:** Not available

## Section 12 – Ecological Data

**Lambda-cyhalothrin Technical:** Slightly toxic to birds. Highly toxic to fish, invertebrates and bees.

### Eco-toxicity:

**Fish acute toxicity:** LC<sub>50</sub>: 0. 24 ug/l (96hr) (Rainbow trout)

**Crustaceans acute toxicity:** LC<sub>50</sub>: .36 ug/l (72hr) (Daphnia magna)

**Algae acute toxicity:** LC<sub>50</sub>: >1000mg/l (96hr)

### Honey Bees:

**Test:** 48-h LD50

**Oral:** 909ng/bee

**Contact:** 38 ng/bee

**Toxicity to Beneficial Insects:** Toxic to some non-target arthropods.

**Bioaccumulative potential:** Lambda-cyhalothrin: BCF 1063 (Has the potential bioaccumulation)

**Biodegradation potential:** Lambda-cyhalothrin: It does not decompose.

**Mobility in Soil:** Lambda-cyhalothrin: Koc 151200 (can be adsorbed in the soil).



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**Other:** 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 rinsate. 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.

## Section 13 – Disposal Considerations

**Waste Disposal:** Do not contaminate water, food, or feed by disposal. Dispose of waste in accordance with all applicable Federal, State, and local laws. Improper disposal of excess pesticide, spray mixture, or rinsate is violation of Federal Law. If these waste 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.

**Container Disposal:** Do not distribute, make available, furnish or reuse empty containers. 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 authorities, If burned, stay out of smoke.

## Section 14 – Transport Information

**Proper Shipping Name:** Pyrethroid Pesticides, Liquid, Toxic, N.O.S. (contains Lambda-Cyhalothrin)

**Hazard Class or Division:** Class 6.1

**Identification Number:** UN 3352

**Packing Group:** PGIII

## Section 15 – Regulatory Data

### EPCRA SARA Title III Classification

**Section 311/312 Hazard Classes:** Acute Health Hazard  
Chronic Health Hazard  
Fire Hazard

**Section 313 Toxic Chemicals:** 1,2,4-Trimethylbenzene (<math>\leq 10.1\%</math>) (CAS No. 95-63-6)  
Ethyl Benzene (<math>\leq 1.5\%</math>) (CAS No. 100-41-4)  
Xylene (<math>\leq 7.4\%</math>) (CAS No. 1330-20-7)

### California Proposition 65

Not applicable

### CERCLA/SARA 302 Reportable Quantity (RQ)

Report product spills > 175 gal. (based on p-xylene [RQ=100lbs] in the formulation)

### RCRA Hazardous Waste Classification (40 CFR 261)



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Not applicable

## TSCA Status

Exempt from TSCA

## GHS labeling elements:

The substance is classified and labeled according to the Globally Harmonized System (GHS):

## Hazard pictograms:



**Signal Word:** Danger

**Hazard-determined components of labeling:** Lambda-cyhalothrin

## Hazard statements:

Fatal if swallowed

Very Toxic to aquatic life with long lasting effects

Cause serious eye damage

Highly Flammable liquid and vapor

## Precautionary Statements:

**Prevention:** Avoid breathing dust/fume/gas/mist/vapour/spray.

Avoid release to the environment

Keep away from heat/spark/open flames/hot surfaces.

No Smoking

Keep Container tightly closed

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting

Use only non-sparking tools

Take precautionary measures against static discharge.

Wear protective gloves/eye protection/face protection

## Response:

**If in Eye:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**If on Skin:** Take off immediately all contaminated clothing. Rinse skin with water. If skin irritation occurs seek medical advice/attention.

**If Inhaled:** Remove person to fresh air and keep at rest in a position comfortable for breathing. Wash contaminated clothing before reuse. Call a poison center or doctor/physician if you feel unwell.

**In case of Fire:** Use dry powder, foam or carbon dioxide. 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 building, area and equipment until decontaminated.

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Runoff can cause environmental damage. If water is used to fight fire, build a dike and collect runoff.

**If Swallowed:** Rinse mouth and Do not induce vomiting. Immediately call a Poison Center/doctor.

**Other effects of overexposure:** High levels of the active ingredient lambda-cyhalothrin may induce neurotoxic effects such as staggering gait, muscle tremors and convulsions.

**Storage:** Store in a well-ventilated place. Keep cool.

**Disposal:** Dispose of contents and containers in accordance with local, regional, federal and international regulations.

**NFPA Grade (0-4 level):** Health: 2, Flammability: 3, Reactivity: 0

**HMIS Grade (0-4 level):** Health: 2, Flammability 3, Reactivity: 0

## Section 16 – Additional information

**Reference:** The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein. This Safety Data Sheet was compiled with data and information from the following source: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

MSDS Date issue 5/3/07

SDS Rev. Date: 5/7/15