

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name: Lambdastar
Product Description: Capsule Suspension

Chemical description of active substance (s): A product comprising equal quantities of (S)- α -cyano-3-phenoxybenzyl (Z)-(1R,3R)-3-(2-dimethylcyclopropanecarboxylate phenoxybenzyl (Z)-(1S,3S)-=3-(2-chloro-3,3,3-trifluoropropenyl)-2,2-chloro-3,3,3-trifluoropropenyl)-2,2- =dimethylcyclopropanecarboxylate and (R)- α -cyano-3- phenoxybenzyl (Z)-(1S,3S)-=3-(2-chloro-3,3,3-trifluoropropenyl)-2,2-dimethylcyclopropanecarboxylate.

Chemical Family: Pyrethroid
GCPF code: CS (Capsule Suspension)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product Use: Agriculture – Insecticide

1.3 Details of the supplier of the safety data sheet

Company: Life Scientific Ltd,
NovaUCD,
Belfield Innovation Park
Dublin 4
Ireland
Telephone: +353 (0) 1 2832024
Fax: +353 (0) 1 2832026
Web: www.lifescientific.com

1.4 Emergency contact information

In case of Emergency: www.npis.org
www.nhsdirect.nhs.uk - 0845 4647 or 111
www.nhs24.com - 08454 24 24 24

2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

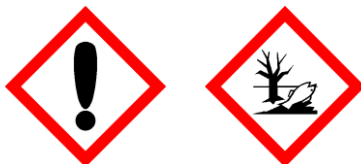
Classification according to Regulation (EC) No 1272/2008

Acute Tox.	Category 4	H302
Acute Tox.	Category 4	H332
Aquatic. Acute	Category 1	H400
Aquatic Chronic	Category 1	H410

2.2 Label Elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms:



Signal Word:

Warning

Hazard Statements:

H302	Harmful if swallowed.
H332	Harmful if inhaled.
H410	Very toxic to aquatic life with long-lasting effects.

Precautionary Statements:

P261	Avoid breathing spray
P264	Wash hands thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P271	Use only outdoors in a well ventilated area
P301+P312	IF SWALLOWED: Call a POISON CENTER
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P330	Rinse mouth
P391	Collect spillage
P501	Dispose of contents/container according to local regulations

2.3 Other Hazards

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

3. COMPOSITION / INFORMATION ON INGREDIENTS**3.1 Substances**

No substances fulfil the criteria set out in Annex II, Part A of the REACH Regulation (EC) No 1907/2006.

3.2 Mixtures

Chemical Name	CAS No	EC No	Classification (Regulation(EC) No 1272/2008)	Concentration (% w/w)
Lambda-cyhalothrin	91465-08-6	415-130-7	Acute Tox. 2, H330 Acute Tox. 3, H301 Acute Tox. 4, H312 Aqua. Acute 1, H400 Aquatic Chronic 1, H410	9.6
*Propylene glycol	57-55-6	200-338-0	-	20 - 30
Solvent naphtha (petroleum), naphthalene	64742-94-5	265-198-5	Asp. Tox. 1, H304 STOT SE 3, H336 Aquatic Chronic 2, H411 EUH:066	5 – 10
1,2-benzisothiazol-3(2H)-one	2634-33-5	220-120-9	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400	0.05 – 0.1

*Substance for which there are exposure limits in the workplace.

4. FIRST AID MEASURES**4.1 Description of first aid measures**

General information:	In the event of any complaints or symptoms, avoid further exposure. Treat symptomatically. If unwell, consult a physician showing the product container, label or this safety data sheet.
Inhalation:	If inhaled, remove victim to fresh air. If breathing is difficult, give oxygen. If breathing is irregular or stopped, give artificial respiration. Consult a physician or Poison Control Centre immediately.
Ingestion:	DO NOT induce vomiting unless directed to do so by a Poison Control Centre. Never give anything by mouth to an unconscious person. Rinse mouth with plenty of water. Seek medical advice immediately.
Skin contact:	Remove contaminated clothing immediately. Wash immediately with plenty of water. If skin irritation persists, consult a physician. Wash contaminated clothing before re-use.
Eye contact:	Remove contact lenses if present. Rinse immediately with plenty of water, with the eyelid open for at least 15 minutes. Obtain medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

Skin contact paraesthesia effects (itching, tingling, burning or numbness) may occur lasting up to 24 hours. If these symptoms present at any time when handling product, cease use and consult a medical physician

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physicians: Skin contact paraesthesia effects (itching, tingling, burning or numbness) are transient, lasting up to 24 hours. Treat symptomatically. Contains petroleum distillates and/or aromatic solvents

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

For small fires: Use water spray, dry chemical, alcohol-resistant foam or carbon dioxide.
For large fires: Use alcohol-resistant foam or water spray. Avoid using a solid water stream as it may cause the fire to scatter or spread.

5.2 Special hazards arising from the substance or mixture

This product contains combustible organic components. Fire will produce a thick black smoke containing hazardous products of combustion. Exposure to products of combustion may be a health hazard.
Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

5.3 Advice for firefighters

Wear self-contained breathing apparatus with full face shield. Fight fire from a safe distance and a protected location.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use appropriate personal protective equipment, see section 8. For safe handling and storage, see section 7.

6.2 Environmental precautions

Prevent further leaking or spillage if safe to do so. Prevent entry into sewers and public waters. In the event of a major spillage, contact an expert immediately. Notify appropriate authorities if the product enters sewers or public waters. Make provisions to collect extinguishing water after fires. If the product contaminates rivers and lakes or drains, inform respective authorities

6.3 Methods and materials for containment and cleaning up

Contain spillage. Use non-combustible absorbent material to absorb spillage and place in container for disposal according to local/national legislation.

6.4 Reference to other sections

See Section 7 for information on handling and storage and Section 8 for information on PPE

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

No special technical protective measures required. No special handling advice required. Read label before use. DO NOT eat, drink or smoke during use. Avoid contact with skin and eyes.

7.2 Conditions for safe storage, including any incompatibilities

No special storage conditions required. Keep containers tightly closed in a cool, dry and well-ventilated area. Keep out of reach of children. Keep separate from food, drink and animal feed.

7.3 Specific end use(s)

Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control parameters

Component	Exposure Limit	Value Type	Source
Lambda-cyhalothrin	0.04 mg/m ³	TWA	Supplier
Propane-1,2-diol	10 mg/m ³ particulates 150 ppm Total (vapour and particulates) 474 mg/m ³	TWA	UK EH40 Occupational Exposure Limits
Solvent naphtha (petroleum), heavy aromatic	15 ppm 100 mg/m ³	TWA	Supplier

8.2 Exposure controls

Respiratory protection:	Protection provided by air-purifying respirators is limited. A combination gas, vapour and particulate respirator may be necessary until effective technical measures are introduced. Use self-contained breathing apparatus in case of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.
Skin protection:	Wear suitable chemical-resistant clothing based on the potential for skin contact. Wash body thoroughly with soap and water after removing protective clothing. Decontaminate protective clothing before re-use. Wear an impervious protective suit as appropriate.
Hand protection:	Use nitrile rubber or other suitable chemical-resistant gloves. Gloves should have a minimum breakthrough time that is appropriate to the duration of exposure. Gloves should be changed when breakthrough is suspected.
Eye protection:	Eye protection is not usually required. Follow any site-specific eye protection policies. Eye/face protection should be certified to EN 166.
Engineering measures:	Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. If airborne mists or vapours are generated, use local exhaust ventilation controls. Assess exposure and use appropriate additional measures to keep airborne levels below the relevant exposure limit. Where necessary, seek occupational hygiene advice.
Hygiene measures:	When using, DO NOT eat, drink or smoke. Wash hands and face with soap and water before breaks. Shower at the end of the workday. Decontaminate protective clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Form	Suspension
Colour	Beige to cream
Odour	Aromatic, weak.

Chemical properties

pH (at 20 °C)	5.0 – 7.0
Boiling point (°C)	100
Flash point (°C)	> 93
Oxidising properties	Not oxidising
Explosive properties	Not explosive
Density (g/cm ³)	1.057 at 20 °C
Solubility in water	Miscible
Log P octanol/water at 20°C	No data available
Kinematic Viscosity (cSt)	107 at 20 °C

9.2 Other Information

None

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data is available.

10.2 Chemical Stability

This mixture is stable at the handling and storage conditions recommended in Section 7.

10.3 Possibility of hazardous reactions

Exposed to high temperatures, the mixture may release dangerous decomposition products such as carbon monoxide and dioxide, smoke and nitrogen oxide.

10.4 Conditions to avoid

Avoid: Heat

10.5 Incompatible material

No data is available.

10.6 Hazardous decomposition products

Thermal decomposition may release / form:

- Carbon monoxide (CO)
- Carbon dioxide (CO₂)

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

LD ₅₀ oral rat:	334 mg/kg (males) and 404 mg/kg (females).
LD ₅₀ subcutaneous rat:	> 2000 mg/kg.
LC ₅₀ inhalation rat:	> 2.5 mg/L/4 h. Based on test results obtained with similar products.
Eye irritation rabbit:	Mild.
Skin irritation rabbit:	Non-irritant. May cause temporary itching, tingling, burning or numbness of exposed skin.
Sensitisation guinea pig:	Likely to cause skin sensitisation.
Long-term toxicity:	No evidence of carcinogenic, teratogenic or mutagenic effects in animal experiments.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

LC ₅₀ mirror carp (96 h):	12 µg/L
EC ₅₀ Daphnia magna (48 h):	2.6 µg/L

12.2 Persistence and degradability

Stability in water:	Lambda-cyhalothrin is not persistent in water.
Stability in soil:	Lambda-cyhalothrin is moderately persistent in soil.

12.3 Bioaccumulative potential

Lambda-cyhalothrin bioaccumulates.

12.4 Mobility in soil

Lambda-cyhalothrin is immobile in soil and will not leach.

12.5 Results of PBT and vPvB assessment

The mixture does not meet the criteria applicable to mixtures PBT or vPvB in accordance with Annex XIII of the REACH Regulation (EC) No 1907/2006.

12.6 Other adverse effects

None

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal procedures: Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible, recycling is preferred to disposal or incineration. If recycling is not practical, dispose of in compliance with local regulations.

Contaminated packaging: Empty remaining contents. Triple rinse containers. Do not re-use empty containers. Empty containers should be taken for local recycling or waste disposal.

14. TRANSPORT INFORMATION

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO / IATA for air transport (ADR 2013 - IMDG 2012 - ICAO / IATA 2013).

14.1 UN Number

3082

14.2 UN proper shipping name

Environmentally hazardous substance, liquid, N.O.S., (lambda-cyhalothrin and substituted benzenoid hydrocarbons).

14.3 Transport hazard class(es)

9

14.4 Packing group

III

14.5 Environmental hazards

Marine pollutant, Dangerous to the environment

14.6 Special precautions for user

None

14.7 Transport in bulk according to Annex II of Marpol 73/78 and the IBC code

No Information available

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture relating to the classification and labelling contained in Section 3.

To avoid risks to man and the environment comply with the instructions for use.

The mixture contains no ' substances of very high concern "(SVHC) published by the European Chemicals Agency (ECHA) under Article 57 of REACH <http://echa.europa.eu/uk/candidate-list-table>

15.2 Chemical safety assessment

None

16. OTHER INFORMATION

Full list of Hazard statements that were not given in full in sections 2 and 3.

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes severe eye damage.
H330	Fatal if inhaled.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic organisms.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH401	Follow the instructions to avoid risks to human health and the environment.
EUH066	Repeated exposure may cause skin dryness or cracking skin.

The information presented in this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. However, the information given is designed only as a guidance for methods of handling, storage, use, transportation and disposal of the product, and is not considered to be a warranty or quality specification. Life Scientific Limited shall not be held liable for any loss or damage resulting from the handling, storage, use or disposal of the product. The information contained in this MSDS relates only to this specific product and may not be valid if this product is used in combination with any other products.

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