

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 11 Jul 2024

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

1.1. Product name:

lambda-Cyhalothrin

1.1. Catalog No.:

692312

1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical
uses: R&D

1.3. Uses advised against:

HPC Standards GmbH
Am Wieseneck 7

04451 Cunnersdorf
Deutschland

Tel. +49 34291 3372-36
Fax. +49 34291 3372-39
contact@hpc-standards.com

1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36
This number is only available during office hours.

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture
Regulation (EC) No 1272/2008
Acute toxicity - Oral Category 3 - (H301)
Acute toxicity - Dermal Category 3 - (H311)
Acute toxicity - Inhalation (Dusts/Mists) Category 2 - (H330)
Acute aquatic toxicity Category 1 - (H400)
Chronic aquatic toxicity Category 1 - (H410)

2.2. Label elements

2.2.1. Pictogram



2.2.2.

2.2. Label elements
415-130-7

Contains Lambda-cyhalothrin (ISO)

Signal word

Danger

Hazard statements

H301 - Toxic if swallowed

H311 - Toxic in contact with skin

H330 - Fatal if inhaled

H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)

P260 - Do not breathe dust/fume/gas/mist/vapours/spray

P273 - Avoid release to the environment

P280 - Wear protective gloves and protective clothing

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P310 - Immediately call a POISON CENTER or doctor

P391 - Collect spillage

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

2.3. Other hazards

No information available.

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

Chemical name: Lambda-cyhalothrin (ISO)

EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances of Very High Concern (SVHC) for Authorisation

EU - REACH (1907/2006) - Endocrine Disruptor Assessment List of Substances

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical name: Lambda-cyhalothrin (ISO) 91465-08-6

Weight-%: 100

REACH registrationnumber: -

EC No:415-130-7

Classification according to Regulation (EC) No. 1272/2008 [CLP] :

Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 2 (H330) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)

Specific concentration limit (SCL) :-

M-Factor: 10000

M-Factor (long-term): 10000

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name: Lambda-cyhalothrin (ISO) 91465-08-6

Oral LD50 mg/kg : 56

Dermal LD50 mg/kg: 632

Inhalation LC50 - 4 hour - dust/mist - mg/L: No data available

Inhalation LC50 - 4 hour - vapour - mg/L: No data available

Inhalation LC50 - 4 hour - gas - ppm : No data available

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

3.1.1. Formula

C23H19CIF3NO3

3.1.2. Molecular Weight (g/mol)

449.40

3.1.3. CAS-No.

91465-08-6

4. FIRST AID MEASURES

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Inhalation If breathing has stopped, give artificial respiration. Get medical attention immediately.

Remove to fresh air. Do not breathe dust. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen.

Eye contact Get immediate medical advice/attention. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing.

Skin contact Get immediate medical advice/attention. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

Self-protection of the first aider Do not breathe dust. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Use personal protective equipment as required. See section 8 for more information. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms Coughing and/ or wheezing. Difficulty in breathing.

4.3. Indication of any immediate medical attention and special treatment needed

Note to doctors Treat symptomatically.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical

No information available.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid generation of dust. Do not breathe dust. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas.

Other information Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling Do not breathe dust. Avoid generation of dust. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Take off contaminated clothing and wash it before reuse.

General hygiene considerations Do not breathe dust. Take off contaminated clothing and wash it before reuse.

Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work.

Wear suitable gloves and eye/face protection.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Store locked up. Please refer to the manufacturers certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA.

7.3. Specific end use(s) Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC)

No information available.

8.2. Exposure controls

Personal protective equipment

Eye/face protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves. Impervious gloves. The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374.

Gloves Duration of contact

PPE - Glove material :Wear protective Viton gloves

Glove thickness

Break through time
Skin and body protection Long sleeved clothing. Chemical resistant apron. Wear suitable protective clothing.
Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General hygiene considerations Do not breathe dust. Take off contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection.
Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties
Physical state Solid
Appearance Solid
Colour off-white
Odour No information available.
Odour threshold No information available
Property Values Remarks o Method
Melting point / freezing point 49.2 °C None known
Boiling point / boiling range > 270 °C None known
Flammability (solid, gas) No data available None known
Flammability Limit in Air None known
Upper flammability or explosive limits
No data available
Lower flammability or explosive limits
No data available
Flash point 83 °C None known
Autoignition temperature 380 °C None known
Decomposition temperature None known
pH No data available None known
pH (as aqueous solution) No data available No information available
Kinematic viscosity No data available None known
Dynamic viscosity No data available None known
Water solubility 0.005 mg/L None known
Solubility(ies) DMSO, Chloroform, Methanol, slightly soluble
None known
Partition coefficient 7 None known
Vapour pressure No data available None known
Relative density 1.29 g/cm3 None known
Bulk density No data available
Liquid Density No data available
Relative vapour density No data available None known
Particle characteristics
Particle Size No information available
Particle Size Distribution No information available
9.2. Other information
Molecular weight 449.88
Molecular formula C₄₆H₃₈Cl₂F₆N₂O₆
9.2.1. Information with regards to physical hazard classes
Not applicable
9.2.2. Other safety characteristics
No information available

10. STABILITY AND REACTIVITY

- 10.1. Reactivity
Reactivity No information available.
- 10.2. Chemical stability
Stability Stable under normal conditions.
Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge None.
- 10.3. Possibility of hazardous reactions
Possibility of hazardous reactions None under normal processing.
- 10.4. Conditions to avoid
Conditions to avoid Excessive heat.
- 10.5. Incompatible materials
Incompatible materials None known based on information supplied.
Hazardous decomposition products None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

- 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Information on likely routes of exposure
Product Information
Inhalation Specific test data for the substance or mixture is not available. Fatal if inhaled. (based on components).
Eye contact Specific test data for the substance or mixture is not available.
Skin contact Specific test data for the substance or mixture is not available. Toxic in contact with skin. (based on components).
Ingestion Specific test data for the substance or mixture is not available. Toxic if swallowed. (based on components).
Symptoms related to the physical, chemical and toxicological characteristics
Symptoms Coughing and/ or wheezing. Difficulty in breathing.
Numerical measures of toxicity
Acute toxicity
Component Information
Chemical name: Lambda-cyhalothrin (ISO)
Oral LD50 = 56 mg/kg (Rat)
Dermal LD50 = 632 mg/kg (Rat)
Inhalation LC50
Delayed and immediate effects as well as chronic effects from short and long-term exposure
Skin corrosion/irritation Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation No information available.
Respiratory or skin sensitisation No information available.
Germ cell mutagenicity No information available.
Carcinogenicity No information available.
Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration hazard No information available.
- 11.2. Information on other hazards
11.2.1. Endocrine disrupting properties
Endocrine disrupting properties
11.2.2. Other information
Other adverse effects No information available.

12. ECOLOGICAL INFORMATION

- 12.1. Toxicity
Ecotoxicity Very toxic to aquatic life with long lasting effects.
Chemical name: Lambda-cyhalothrin (ISO)
Algae/aquatic plants EC50: >0.005 mg/L (72h, Pseudokirchneriella subcapitata)
Fish LC50: 0.00021 mg/L (96h, Lepomis macrochirus)

Toxicity to microorganisms
Crustacea EC50: 0.00023 mg/L (48h, Daphnia magna)
12.2. Persistence and degradability
Persistence and degradability No information available.
12.3. Bioaccumulative potential
Bioaccumulation There is no data for this product.
Component Information
Chemical name Lambda-cyhalothrin (ISO)
Partition coefficient 7
12.4. Mobility in soil
Mobility in soil No information available.
12.5. Results of PBT and vPvB assessment
PBT and vPvB assessment No information available.
12.6. Endocrine disrupting properties
Endocrine disrupting properties No information available.
12.7. Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Waste from residues/unused
products
Dispose of in accordance with local regulations. Dispose of waste in accordance with
environmental legislation.
Contaminated packaging Do not reuse empty containers.

14. TRANSPORT INFORMATION

IATA
14.1 UN number or ID number UN3349
14.2 UN proper shipping name Pyrethroid pesticide, solid, toxic (Lambda-cyhalothrin (ISO))
14.3 Transport hazard class(es) 6.1
14.4 Packing group II
Description UN3349, Pyrethroid pesticide, solid, toxic (Lambda-cyhalothrin (ISO)), 6.1, II
14.5 Environmental hazards Yes
14.6 Special precautions for user
Special Provisions A3, A5
ERG Code 6L
IMDG
14.1 UN number or ID number UN3349
14.2 UN proper shipping name Pyrethroid pesticide, solid, toxic (Lambda-cyhalothrin (ISO))
14.3 Transport hazard class(es) 6.1
14.4 Packing group II
Description UN3349, Pyrethroid pesticide, solid, toxic (Lambda-cyhalothrin (ISO)), 6.1, II, Marine
pollutant
14.5 Marine pollutant P
Environmental hazards Yes
14.6 Special precautions for user
Special Provisions 61, 274
EmS-No F-A, S-A No information available
14.7 Maritime transport in bulk
according to IMO instruments
No information available
RID
14.1 UN number or ID number UN3349
14.2 UN proper shipping name Pyrethroid pesticide, solid, toxic (Lambda-cyhalothrin (ISO))
14.3 Transport hazard class(es) 6.1
14.4 Packing group II
Description UN3349, Pyrethroid pesticide, solid, toxic (Lambda-cyhalothrin (ISO)), 6.1, II,

Environmentally Hazardous

14.5 Environmental hazards Yes

14.6 Special precautions for user

Special Provisions 61, 274, 648

Classification code T7

ADR

14.1 UN number or ID number UN3349

14.2 UN proper shipping name Pyrethroid pesticide, solid, toxic (Lambda-cyhalothrin (ISO))

14.3 Transport hazard class(es) 6.1

14.4 Packing group II

Description UN3349, Pyrethroid pesticide, solid, toxic (Lambda-cyhalothrin (ISO)), 6.1, II, (D/E),

Environmentally Hazardous

14.5 Environmental hazards Yes

14.6 Special precautions for user

Special Provisions 61, 274, 648

Classification code T7

Tunnel restriction code (D/E)

15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Water hazard class (WGK) strongly hazardous to water (WGK 3)

Poland SDS created according to the following Polish regulation: Act of February 25, 2011

on chemical substances and their mixtures (Journal of Laws of 2018, item 143, as

amended). Regulation (EC) No 1907/2006 of the European Parliament and of the

Council on the Registration, Evaluation, Authorization and Restriction of Chemicals

(REACH), establishing the European Chemicals Agency (EC) as amended. Regulation

(EC) No 1272/2008 of the European Parliament and of the Council of 16 December

2008 on classification, labeling and packaging of substances and mixtures, as

amended. Regulation of the Minister of Health of 10 August 2012 on the criteria and

method of classifying chemical substances and their mixtures (Journal of Laws of

2012, item 1018). Regulation of the Minister of Health of 20 April 2012 on labeling

packaging of hazardous substances and mixtures and some mixtures (Journal of

Laws of 2012, item 445). Regulation of the Minister of Family, Labor and Social Policy

of 12 June 2018 on the maximum allowable concentrations and intensities of factors

harmful to health in the work environment (Journal of Laws of 2018, item 1286).

Announcement of the Minister of Economy, Labor and Social Policy of August 28,

2003 on the publication of the unified text of the Ordinance of the Minister of Labor

and Social Policy on general health and safety at work regulations (Journal of Laws

of 2003, No. 169, item 1650). Regulation of the Minister of Health of 30 December

2004 on occupational safety and health related to the presence of chemical agents in

the workplace (Journal of Laws of 2005, No. 11, item 86). Act of December 14, 2012

on waste (Journal of Laws of 2013, item 21) Regulation of the Minister of Health of

December 30, 2004 on occupational health and safety related to the presence of

chemical agents in the workplace (Journal U. of 2005, No. 11, item 86). Waste Act of

December 14, 2012 (Journal of Laws of 2013, item 21). Act of 13 June 2013 on the

management of packaging and packaging waste, Journal of Laws 2013, item 888).

Government statement of September 24, 2002 - European Agreement on the

International Carriage of Dangerous Goods by Road (ADR) (Journal of Laws No. 194,

item 1629 and Journal of Laws of 2003, No. 207, item 2013 and 2014).

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical

agents

at work.

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)

This

product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

DIRECTIVE (EU) 2021/1187 on the marketing and use of explosives precursors

Not applicable

Persistent Organic Pollutants

Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

H2 - ACUTE TOXIC

E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

Plant protection products directive (91/414/EEC)

Chemical name: Lambda-cyhalothrin (ISO) - 91465-08-6

Plant protection products directive (91/414/EEC): Plant protection agent

EU - Biocidal Product Regulation ((EU) 528/2012)

Chemical name: Lambda-cyhalothrin (ISO) - 91465-08-6
EU - Biocidal Product Regulation ((EU) 528/2012) Product-type 18: Insecticides, acaricides and products to control other arthropods

International Inventories

TSCA Contact supplier for inventory compliance status

DSL/NDSL Contact supplier for inventory compliance status

EINECS/ELINCS Contact supplier for inventory compliance status

ENCS Contact supplier for inventory compliance status

IECSC Contact supplier for inventory compliance status

KECL Contact supplier for inventory compliance status

PICCS Contact supplier for inventory compliance status

AICS Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

Chemical Safety Report A Chemical Safety Assessment has been carried out for this substance

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!