

## Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version 8.0      Revision Date: 2023/09/30      SDS Number: 1078716-00019      Date of last issue: 2023/04/04  
Date of first issue: 2016/11/18

---

### 1. PRODUCT AND COMPANY IDENTIFICATION

Chemical product name : Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

#### Supplier's company name, address and phone number

Company name of supplier : MSD

Address : Kumagaya, Saitama Prefecture , Xicheng 810 MSD Co., Ltd.  
Menuma factory

Telephone : 048-588-8411

E-mail address : EHSDATASTEWARD@msd.com

Emergency telephone number : +1-908-423-6000

#### Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product

Restrictions on use : Not applicable

---

### 2. HAZARDS IDENTIFICATION

#### GHS classification of chemical product

Acute toxicity (Inhalation) : Category 4

Acute toxicity (Dermal) : Category 4

Serious eye damage/eye irritation : Category 2B

Specific target organ toxicity - single exposure : Category 2 (Nervous system)

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

#### GHS label elements


# SAFETY DATA SHEET



## Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version 8.0      Revision Date: 2023/09/30      SDS Number: 1078716-00019      Date of last issue: 2023/04/04  
Date of first issue: 2016/11/18

---

- Hazard pictograms : 
- Signal word : Warning
- Hazard statements : H312 + H332 Harmful in contact with skin or if inhaled.  
H320 Causes eye irritation.  
H371 May cause damage to organs (Nervous system).  
H410 Very toxic to aquatic life with long lasting effects.
- Precautionary statements : **Prevention:**  
P260 Do not breathe mist or vapours.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing.
- Response:**  
P302 + P352 + P312 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell.  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.  
P391 Collect spillage.
- Storage:**  
P405 Store locked up.
- Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

### Other hazards which do not result in classification

None known.

---

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

# Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version 8.0      Revision Date: 2023/09/30      SDS Number: 1078716-00019      Date of last issue: 2023/04/04  
 Date of first issue: 2016/11/18

## Components

Chemical name	CAS-No.	Concentration (% w/w)	ENCS No.
Decamethylcyclopentasiloxane	541-02-6	>= 1 - < 10	7-475
lambda-cyhalothrin (ISO)	91465-08-6	1	

## 4. FIRST AID MEASURES

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
 When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.  
 If not breathing, give artificial respiration.  
 If breathing is difficult, give oxygen.  
 Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water.  
 Remove contaminated clothing and shoes.  
 Get medical attention.  
 Wash clothing before reuse.  
 Thoroughly clean shoes before reuse.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.  
 If easy to do, remove contact lens, if worn.  
 Get medical attention.
- If swallowed : If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel.  
 Get medical attention.  
 Rinse mouth thoroughly with water.  
 Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : Harmful in contact with skin or if inhaled.  
 Causes eye irritation.  
 May cause damage to organs.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- Notes to physician : Treat symptomatically and supportively.

## 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray  
 Alcohol-resistant foam  
 Carbon dioxide (CO<sub>2</sub>)  
 Dry chemical
- Unsuitable extinguishing media : None known.
- Specific hazards during fire-fighting : Vapours may form explosive mixtures with air.  
 Exposure to combustion products may be a hazard to health.

## Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 2023/04/04
8.0	2023/09/30	1078716-00019	Date of first issue: 2016/11/18

---

- Hazardous combustion products : Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)  
Chlorine compounds  
Fluorine compounds  
Silicon oxides  
Formaldehyde
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use water spray to cool unopened containers.  
Remove undamaged containers from fire area if it is safe to do so.  
Evacuate area.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.
- 

### 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
- Environmental precautions : Avoid release to the environment.  
Prevent further leakage or spillage if safe to do so.  
Prevent spreading over a wide area (e.g. by containment or oil barriers).  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material.  
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.  
Clean up remaining materials from spill with suitable absorbent.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.  
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.
- 

### 7. HANDLING AND STORAGE

#### Handling

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.
-

## Lambda-Cyhalothrin / Decamethylcyclopenta-siloxane Formulation

Version 8.0      Revision Date: 2023/09/30      SDS Number: 1078716-00019      Date of last issue: 2023/04/04  
Date of first issue: 2016/11/18

- Advice on safe handling : Do not get on skin or clothing.  
Do not breathe mist or vapours.  
Do not swallow.  
Do not get in eyes.  
Wash skin thoroughly after handling.  
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
Keep container tightly closed.  
Do not eat, drink or smoke when using this product.  
Take care to prevent spills, waste and minimize release to the environment.  
Do not breathe decomposition products.
- Avoidance of contact : Oxidizing agents
- Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.  
When using do not eat, drink or smoke.  
Wash contaminated clothing before re-use.  
The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.
- Storage**
- Conditions for safe storage : Keep in properly labelled containers.  
Store locked up.  
Keep tightly closed.  
Keep in a cool, well-ventilated place.  
Store in accordance with the particular national regulations.
- Materials to avoid : Do not store with the following product types:  
Oxidizing solids  
Oxidizing liquids
- Packaging material : Unsuitable material: None known.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Threshold limit value and permissible exposure limits for each component in the work environment

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Reference concentration / Permissible concentration	Basis
lambda-cyhalothrin (ISO)	91465-08-6	TWA	5 µg/m <sup>3</sup> (OEB 4)	Internal
	Further information: Skin			
		Wipe limit	50 µg/100 cm <sup>2</sup>	Internal

## Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version 8.0      Revision Date: 2023/09/30      SDS Number: 1078716-00019      Date of last issue: 2023/04/04  
 Date of first issue: 2016/11/18

### Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Formaldehyde	50-00-0	ACL	0.1 ppm	JP OEL ISHL
		OEL-M	0.1 ppm 0.12 mg/m <sup>3</sup>	JP OEL JSOH
	Further information: Airway sensitizing agent; Group 2 substances which probably induce allergic reactions in humans., Skin sensitizing agent; Group 1 substances which induce allergic reactions in humans, Group 2A: probably carcinogenic to humans			
		OEL-C	0.2 ppm 0.24 mg/m <sup>3</sup>	JP OEL JSOH
	Further information: Airway sensitizing agent; Group 2 substances which probably induce allergic reactions in humans., Skin sensitizing agent; Group 1 substances which induce allergic reactions in humans, Group 2A: probably carcinogenic to humans			
		TWA	0.1 ppm	ACGIH
		STEL	0.3 ppm	ACGIH

**Engineering measures** : All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment. Essentially no open handling permitted. Use closed processing systems or containment technologies. If handled in a laboratory, use a properly designed biosafety cabinet, fume hood, or other containment device if the potential exists for aerosolization. If this potential does not exist, handle over lined trays or benchtops.

### Personal protective equipment

**Respiratory protection** : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

**Filter type** : Combined particulates, inorganic gas/vapour and organic vapour type

**Hand protection**

**Material** : Chemical-resistant gloves

**Remarks** : Consider double gloving.

**Eye protection** : Wear safety glasses with side shields or goggles. If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles. Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

**Skin and body protection** : Work uniform or laboratory coat. Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces.

**Lambda-Cyhalothrin / Decamethylcyclopenta-siloxane Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 2023/04/04
8.0	2023/09/30	1078716-00019	Date of first issue: 2016/11/18

---

Use appropriate degowning techniques to remove potentially contaminated clothing.

---

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical state	:	liquid
Colour	:	gold
Odour	:	oily
Odour Threshold	:	No data available
Melting point/freezing point	:	No data available
Boiling point, initial boiling point and boiling range	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	No data available
Lower explosion limit and upper explosion limit / flammability limit	:	
Upper explosion limit / Upper per flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	> 93.3 °C
		Method: Tag closed cup
Decomposition temperature	:	No data available
pH	:	No data available
Evaporation rate	:	No data available
Auto-ignition temperature	:	No data available
Viscosity	:	
Viscosity, kinematic	:	61.69 - 73.9 mm <sup>2</sup> /s
Solubility(ies)	:	
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	No data available

**Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 2023/04/04
8.0	2023/09/30	1078716-00019	Date of first issue: 2016/11/18

---

Density and / or relative density  
Relative density : No data available

Density : 0.924 - 0.974 g/cm<sup>3</sup> (20 °C)

Relative vapour density : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Molecular weight : Not applicable

Particle characteristics  
Particle size : Not applicable

---

**10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Vapours may form explosive mixture with air.  
Can react with strong oxidizing agents.  
Hazardous decomposition products will be formed at elevated temperatures.

Conditions to avoid : None known.

Incompatible materials : Oxidizing agents

**Hazardous decomposition products**

Thermal decomposition : Formaldehyde

---

**11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure : Inhalation  
Skin contact  
Ingestion  
Eye contact

**Acute toxicity**

Harmful in contact with skin or if inhaled.

**Product:**

Acute oral toxicity : LD50 (Rat): > 9,500 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 4.1 mg/l  
Remarks: No mortality observed at this dose.

---



# Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version 8.0      Revision Date: 2023/09/30      SDS Number: 1078716-00019      Date of last issue: 2023/04/04  
 Date of first issue: 2016/11/18

Acute dermal toxicity : LD50 (Rabbit): > 1,900 mg/kg

## Components:

### **Decamethylcyclopentasiloxane:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
 Acute inhalation toxicity : LC50 (Rat): 8.67 mg/l  
 Exposure time: 4 h  
 Test atmosphere: dust/mist  
 Method: OECD Test Guideline 403  
 Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
 Assessment: The substance or mixture has no acute dermal toxicity

### **lambda-cyhalothrin (ISO):**

Acute oral toxicity : LD50 (Rat): 56 - 79 mg/kg  
 LD50 (Mouse): 20 mg/kg  
 Acute inhalation toxicity : LC50 (Rat): 0.06 mg/l  
 Exposure time: 4 h  
 Test atmosphere: dust/mist  
 Acute dermal toxicity : LD50 (Rat): 632 - 696 mg/kg  
 Acute toxicity (other routes of administration) : LD50 (Rat): 250 - 750 mg/kg  
 Application Route: Intraperitoneal

### **Skin corrosion/irritation**

Not classified based on available information.

### Product:

Species : Rabbit  
 Result : Mild skin irritation

## Components:

### **Decamethylcyclopentasiloxane:**

Species : Rabbit  
 Result : No skin irritation

### **lambda-cyhalothrin (ISO):**

Species : Rabbit  
 Result : No skin irritation

# Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version 8.0      Revision Date: 2023/09/30      SDS Number: 1078716-00019      Date of last issue: 2023/04/04  
Date of first issue: 2016/11/18

---

## Serious eye damage/eye irritation

Causes eye irritation.

### Product:

Species : Rabbit  
Result : Mild eye irritation

### Components:

#### Decamethylcyclopentasiloxane:

Species : Rabbit  
Result : No eye irritation

#### lambda-cyhalothrin (ISO):

Species : Rabbit  
Result : Mild eye irritation

## Respiratory or skin sensitisation

### Skin sensitisation

Not classified based on available information.

### Respiratory sensitisation

Not classified based on available information.

### Product:

Species : Guinea pig  
Result : Not a skin sensitizer.

### Components:

#### Decamethylcyclopentasiloxane:

Test Type : Local lymph node assay (LLNA)  
Exposure routes : Skin contact  
Species : Mouse  
Result : negative

#### lambda-cyhalothrin (ISO):

Test Type : Magnusson-Kligman-Test  
Exposure routes : Dermal  
Species : Guinea pig  
Result : Not a skin sensitizer.

## Germ cell mutagenicity

Not classified based on available information.

**Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation**

Version 8.0      Revision Date: 2023/09/30      SDS Number: 1078716-00019      Date of last issue: 2023/04/04  
Date of first issue: 2016/11/18

---

**Components:****Decamethylcyclopentasiloxane:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

Test Type: Chromosome aberration test in vitro  
Method: OECD Test Guideline 473  
Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo  
cytogenetic assay)  
Species: Rat  
Application Route: inhalation (vapour)  
Method: OECD Test Guideline 474  
Result: negative

Test Type: Unscheduled DNA synthesis (UDS) test with  
mammalian liver cells in vivo  
Species: Rat  
Application Route: Inhalation  
Method: OECD Test Guideline 486  
Result: negative

**lambda-cyhalothrin (ISO):**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Test Type: Chromosomal aberration  
Test system: Human lymphocytes  
Result: negative

Test Type: unscheduled DNA synthesis assay  
Test system: rat hepatocytes  
Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Test system: mouse lymphoma cells  
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test  
Species: Mouse  
Cell type: Bone marrow  
Application Route: Intraperitoneal  
Result: negative

# Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version 8.0      Revision Date: 2023/09/30      SDS Number: 1078716-00019      Date of last issue: 2023/04/04  
Date of first issue: 2016/11/18

## Carcinogenicity

Not classified based on available information.

## Components:

### lambda-cyhalothrin (ISO):

Species	: Mouse
Application Route	: oral (feed)
Exposure time	: 2 Years
Result	: negative
Remarks	: Based on data from similar materials

Species	: Rat
Application Route	: oral (feed)
Exposure time	: 2 Years
Result	: negative
Remarks	: Based on data from similar materials

## Reproductive toxicity

Not classified based on available information.

## Components:

### Decamethylcyclopentasiloxane:

Effects on fertility	: Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: inhalation (vapour) Method: OPPTS 870.3800 Result: negative
----------------------	---

Effects on foetal development	: Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: inhalation (vapour) Method: OPPTS 870.3800 Result: negative
-------------------------------	---

### lambda-cyhalothrin (ISO):

Effects on fertility	: Test Type: Three-generation study Species: Rat Application Route: oral (feed) General Toxicity - Parent: NOAEL: 2 mg/kg body weight General Toxicity F1: LOAEL: 6.7 mg/kg body weight Symptoms: Reduced offspring weight gain Result: No effects on fertility Remarks: Based on data from similar materials
----------------------	--

Effects on foetal development	: Test Type: Development Species: Rat Application Route: Oral General Toxicity Maternal: NOAEL: 10 mg/kg body weight
-------------------------------	---

## Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 2023/04/04
8.0	2023/09/30	1078716-00019	Date of first issue: 2016/11/18

Developmental Toxicity: LOAEL: 15 mg/kg body weight  
 Result: No effects on foetal development, Reduced maternal body weight gain, Reduced foetal weight  
 Remarks: Based on data from similar materials

Test Type: Development  
 Species: Rabbit  
 Application Route: Oral  
 General Toxicity Maternal: NOAEL: 10 mg/kg body weight  
 Developmental Toxicity: NOAEL: 30 mg/kg body weight  
 Result: No effects on foetal development, Reduced maternal body weight gain, Reduced foetal weight  
 Remarks: Based on data from similar materials

### STOT - single exposure

May cause damage to organs (Nervous system).

#### Components:

##### lambda-cyhalothrin (ISO):

Target Organs	:	Nervous system
Assessment	:	Causes damage to organs.

### STOT - repeated exposure

Not classified based on available information.

### Repeated dose toxicity

#### Components:

##### Decamethylcyclopentasiloxane:

Species	:	Rat
NOAEL	:	1,000 mg/kg
LOAEL	:	> 1,000 mg/kg
Application Route	:	Ingestion
Method	:	OECD Test Guideline 408

##### lambda-cyhalothrin (ISO):

Species	:	Dog
NOAEL	:	2.5 mg/kg
LOAEL	:	12.5 mg/kg
Application Route	:	oral (feed)
Exposure time	:	90 d
Symptoms	:	reduced body weight gain, reduced food consumption

Species	:	Rat
NOAEL	:	10 mg/kg
LOAEL	:	50 mg/kg
Application Route	:	Dermal
Exposure time	:	21 d

## Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version 8.0      Revision Date: 2023/09/30      SDS Number: 1078716-00019      Date of last issue: 2023/04/04  
 Date of first issue: 2016/11/18

|| Target Organs : Nervous system

|| Species : Rat  
 || NOAEL : 0.08 mg/kg  
 || LOAEL : 0.9 mg/kg  
 || Application Route : Inhalation  
 || Exposure time : 21 d  
 || Target Organs : Nervous system

|| Species : Dog  
 || NOAEL : 0.1 mg/kg  
 || LOAEL : 0.5 mg/kg  
 || Application Route : Oral  
 || Exposure time : 1 yr  
 || Target Organs : Nervous system  
 || Symptoms : Gastrointestinal disturbance, Vomiting, Convulsions, ataxia, Liver effects

### Aspiration toxicity

Not classified based on available information.

### Experience with human exposure

#### Product:

Skin contact : Symptoms: May cause, Local irritation

Eye contact : Symptoms: irritating

#### Components:

##### lambda-cyhalothrin (ISO):

|| Inhalation : Symptoms: Cough, Local irritation, sneezing

|| Skin contact : Symptoms: Skin irritation, tingling, superficial burning sensation, Local irritation  
 Remarks: Can be absorbed through skin.

|| Eye contact : Symptoms: Eye irritation

|| Ingestion : Symptoms: Gastrointestinal disturbance

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

##### Decamethylcyclopentasiloxane:

|| Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 16 µg/l

## Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version 8.0      Revision Date: 2023/09/30      SDS Number: 1078716-00019      Date of last issue: 2023/04/04  
Date of first issue: 2016/11/18

		Exposure time: 96 h Remarks: No toxicity at the limit of solubility
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 2.9 µg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: No toxicity at the limit of solubility
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 12 µg/l Exposure time: 96 h Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility
		EC10 (Pseudokirchneriella subcapitata (green algae)): > 12 µg/l Exposure time: 96 h Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility
Toxicity to fish (Chronic toxicity)	:	NOEC (Oncorhynchus mykiss (rainbow trout)): 14 µg/l Exposure time: 90 d Method: OECD Test Guideline 210 Remarks: No toxicity at the limit of solubility
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 15 µg/l Exposure time: 21 d Method: OECD Test Guideline 211 Remarks: No toxicity at the limit of solubility
Toxicity to microorganisms	:	EC50: > 2,000 mg/l Exposure time: 3 h Method: 88/302/EC

### lambda-cyhalothrin (ISO):

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.00019 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
		LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.00021 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.00004 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: Based on data from similar materials

## Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version 8.0      Revision Date: 2023/09/30      SDS Number: 1078716-00019      Date of last issue: 2023/04/04  
Date of first issue: 2016/11/18

M-Factor (Acute aquatic toxicity)	:	10,000
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 0.000062 mg/l Exposure time: 32 d Method: OECD Test Guideline 210 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.0035 µg/l Exposure time: 21 d Method: OECD Test Guideline 211 Remarks: Based on data from similar materials
M-Factor (Chronic aquatic toxicity)	:	10,000

### Persistence and degradability

#### Components:

##### Decamethylcyclopentasiloxane:

Biodegradability	:	Result: Not readily biodegradable. Biodegradation: 0.14 % Exposure time: 28 d Method: OECD Test Guideline 310
------------------	---	--

### Bioaccumulative potential

#### Components:

##### Decamethylcyclopentasiloxane:

Bioaccumulation	:	Species: Pimephales promelas (fathead minnow) Bioconcentration factor (BCF): 7,060 - 13,300 Method: OECD Test Guideline 305
Partition coefficient: n-octanol/water	:	log Pow: 8.023

##### lambda-cyhalothrin (ISO):

Bioaccumulation	:	Bioconcentration factor (BCF): 2,240 Method: OECD Test Guideline 305
Partition coefficient: n-octanol/water	:	log Pow: 7.0 (20 °C)

### Mobility in soil

#### Components:

##### lambda-cyhalothrin (ISO):

Distribution among environmental compartments	:	log Koc: 5.5
---	---	--------------



# Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 2023/04/04
8.0	2023/09/30	1078716-00019	Date of first issue: 2016/11/18

### Hazardous to the ozone layer

Not applicable

### Other adverse effects

No data available

## 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues	:	Dispose of in accordance with local regulations. Do not dispose of waste into sewer.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.

## 14. TRANSPORT INFORMATION

### International Regulations

#### UNRTDG

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (lambda-cyhalothrin (ISO))
Class	:	9
Packing group	:	III
Labels	:	9
Environmentally hazardous	:	yes

#### IATA-DGR

UN/ID No.	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (lambda-cyhalothrin (ISO))
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous
Packing instruction (cargo aircraft)	:	964
Packing instruction (passenger aircraft)	:	964
Environmentally hazardous	:	yes

#### IMDG-Code

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (lambda-cyhalothrin (ISO))
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F

# Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version 8.0      Revision Date: 2023/09/30      SDS Number: 1078716-00019      Date of last issue: 2023/04/04  
 Date of first issue: 2016/11/18

Marine pollutant : yes

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### National Regulations

Refer to section 15 for specific national regulation.

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

ERG Code : 171

## 15. REGULATORY INFORMATION

### Related Regulations

#### Fire Service Law

Group 4, Type 3 petroleum, Water insoluble liquid, (2000 litre), Hazardous rank III

#### Chemical Substance Control Law

Not applicable for Specified Chemical Substance, Monitoring Chemical Substance and Priority Assessment Chemical Substance.

#### Industrial Safety and Health Law

#### Harmful Substances Prohibited from Manufacture

Not applicable

#### Harmful Substances Required Permission for Manufacture

Not applicable

#### Substances Prevented From Impairment of Health

Not applicable

#### Circular concerning Information on Chemicals having Mutagenicity - Annex 2: Information on Existing Chemicals having Mutagenicity

Not applicable

#### Circular concerning Information on Chemicals having Mutagenicity - Annex 1: Information on Notified Substances having Mutagenicity

Not applicable

#### Substances Subject to be Notified Names

Article 57-2 (Enforcement Order Table 9)

Chemical name	Concentration (%)	Remarks
Decamethylcyclopentasiloxane	>=1 - <10	From April 1st, 2026
Lambda-cyhalothrin	>=1 - <10	From April 1st, 2025

# Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version 8.0      Revision Date: 2023/09/30      SDS Number: 1078716-00019      Date of last issue: 2023/04/04  
 Date of first issue: 2016/11/18

## Substances Subject to be Indicated Names

Article 57 (Enforcement Order Article 18)

Chemical name	Remarks
decamethylcyclopentasiloxane	From April 1st, 2026
Lambda-cyhalothrin	From April 1st, 2025

## Ordinance on Prevention of Hazards Due to Specified Chemical Substances

Not applicable

## Ordinance on Prevention of Lead Poisoning

Not applicable

## Ordinance on Prevention of Tetraalkyl Lead Poisoning

Not applicable

## Ordinance on Prevention of Organic Solvent Poisoning

Not applicable

## Enforcement Order of the Industrial Safety and Health Law - Attached table 1 (Dangerous Substances)

Not applicable

## Poisonous and Deleterious Substances Control Law

Deleterious substance

Chemical name	Cabinet Order Number
Organic cyanide compounds and preparations	32

## Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

|| Not applicable

## High Pressure Gas Safety Act

Not applicable

## Explosive Control Law

Not applicable

## Vessel Safety Law

Miscellaneous dangerous substances and articles (Article 2 and 3 of rules on shipping and storage of dangerous goods and its Attached Table 1)

## Aviation Law

Miscellaneous dangerous substances and articles (Article 194 of The Enforcement Rules of Aviation Law and its Attached Table 1)

## Marine Pollution and Sea Disaster Prevention etc Law

Bulk transportation : Noxious liquid substance(Category Y)

Pack transportation : Classified as marine pollutant

# Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 2023/04/04
8.0	2023/09/30	1078716-00019	Date of first issue: 2016/11/18

---

## Narcotics and Psychotropics Control Act

Narcotic or Psychotropic Raw Material (Export / Import Permission)

Not applicable

Specific Narcotic or Psychotropic Raw Material (Export / Import permission)

Not applicable

## Waste Disposal and Public Cleansing Law

Industrial waste

### The components of this product are reported in the following inventories:

AICS : not determined

DSL : not determined

IECSC : not determined

---

## 16. OTHER INFORMATION

### Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Date format : yyyy/mm/dd

### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
JP OEL ISHL : Japan. Administrative Control Levels  
JP OEL JSOH : Japan. The Japan Society for Occupational Health. Recommendation of Occupational Exposure Limits

ACGIH / TWA : 8-hour, time-weighted average  
ACGIH / STEL : Short-term exposure limit  
JP OEL ISHL / ACL : Administrative Control level  
JP OEL JSOH / OEL-M : Occupational Exposure Limit-Mean  
JP OEL JSOH / OEL-C : Occupational Exposure Limit-Ceiling

AiIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory con-

## Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 2023/04/04
8.0	2023/09/30	1078716-00019	Date of first issue: 2016/11/18

---

centration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECl - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

JP / EN