

Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
6.0	03.12.2024	1078719-00019	Date of first issue: 18.11.2016

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Manufacturer or supplier's details

Company name of supplier : MSD
Address : 126 E. Lincoln Avenue
Rahway, New Jersey U.S.A. 07065
Telephone : 908-740-4000
Emergency telephone : 1-908-423-6000
E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product
Restrictions on use : Not applicable

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Acute toxicity (Inhalation) : Category 4
Acute toxicity (Dermal) : Category 4
Serious eye damage/eye irritation : Category 2B
Specific target organ toxicity - single exposure : Category 1 (Nervous system)

GHS label elements

Hazard pictograms :  

Signal Word : Danger

Hazard Statements : H312 + H332 Harmful in contact with skin or if inhaled.
H320 Causes eye irritation.
H370 Causes damage to organs (Nervous system).

Precautionary Statements : **Prevention:**
P260 Do not breathe mist or vapors.
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.
P280 Wear protective gloves/ protective clothing.

Response:

Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
6.0	03.12.2024	1078719-00019	Date of first issue: 18.11.2016

P302 + P352 + P312 IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/ physician if you feel unwell.

P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician 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.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Decamethylcyclopentasiloxane	541-02-6	>= 5 -< 10
lambda-cyhalothrin (ISO)	91465-08-6	>= 1 -< 5

SECTION 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.

Lambda-Cyhalothrin / Decamethylcyclopenta-siloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
6.0	03.12.2024	1078719-00019	Date of first issue: 18.11.2016

If swallowed	: If easy to do, remove contact lens, if worn. Get medical attention. 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. Causes 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.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: Water spray Alcohol-resistant foam Carbon dioxide (CO ₂) Dry chemical
Unsuitable extinguishing media	: None known.
Specific hazards during fire fighting	: Vapors may form explosive mixtures with air. Exposure to combustion products may be a hazard to health.
Hazardous combustion products	: Carbon oxides Nitrogen oxides (NO _x) 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 fire-fighters	: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 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.

Lambda-Cyhalothrin / Decamethylcyclopenta-siloxane Formulation

Version 6.0	Revision Date: 03.12.2024	SDS Number: 1078719-00019	Date of last issue: 30.09.2023 Date of first issue: 18.11.2016
----------------	------------------------------	------------------------------	---

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 diking or other appropriate containment to keep material from spreading. If diked 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.

SECTION 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.

Advice on safe handling : Do not get on skin or clothing.
Do not breathe mist or vapors.
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.

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.

Conditions for safe storage : Keep in properly labeled containers.
Store locked up.
Keep tightly closed.

Lambda-Cyhalothrin / Decamethylcyclopenta-siloxane Formulation

Version 6.0 Revision Date: 03.12.2024 SDS Number: 1078719-00019 Date of last issue: 30.09.2023
 Date of first issue: 18.11.2016

Materials to avoid : Keep in a cool, well-ventilated place.
 Store in accordance with the particular national regulations.
 Do not store with the following product types:
 Strong oxidizing agents
 Self-reactive substances and mixtures
 Organic peroxides
 Explosives
 Gases

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

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

Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Formaldehyde	50-00-0	VLE-P	0.3 ppm	NOM-010-STPS-2014
		TWA	0.1 ppm	ACGIH
		STEL	0.3 ppm	ACGIH

Engineering measures : The information below is intended for larger pilot/commercial-scale operations and manufacturing. For smaller scale, clinical, or pharmacy settings, site-specific internal risk assessment practices should be conducted to determine appropriate exposure control measures. The health hazard risks of handling this material are dependent on multiple factors, including but not limited to physical form and quantity handled. If applicable, use process enclosures, local exhaust ventilation (e.g., Biosafety Cabinet, Ventilated Balance Enclosures), or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels as low as reasonably achievable.

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.

Lambda-Cyhalothrin / Decamethylcyclopenta-siloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
6.0	03.12.2024	1078719-00019	Date of first issue: 18.11.2016

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/vapor and organic vapor 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. Use appropriate degowning techniques to remove potentially contaminated clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	gold
Odor	:	oily
Odor Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	> 93.3 °C Method: Tag closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available

Lambda-Cyhalothrin / Decamethylcyclopenta-siloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
6.0	03.12.2024	1078719-00019	Date of first issue: 18.11.2016

Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	0.924 - 0.974 g/cm ³ (20 °C)
Solubility(ies)	:	
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	
Viscosity, kinematic	:	61.69 - 73.9 mm ² /s
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

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Vapors 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

Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
6.0	03.12.2024	1078719-00019	Date of first issue: 18.11.2016

SECTION 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.
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.

Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
6.0	03.12.2024	1078719-00019	Date of first issue: 18.11.2016

Product:

Species	:	Rabbit
Result	:	Mild skin irritation

Components:**Decamethylcyclopentasiloxane:**

Species	:	Rabbit
Result	:	No skin irritation

lambda-cyhalothrin (ISO):

Species	:	Rabbit
Result	:	No skin irritation

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 sensitization**Skin sensitization**

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Product:

Species	:	Guinea pig
Result	:	Not a skin sensitizer.

Components:**Decamethylcyclopentasiloxane:**

Test Type	:	Local lymph node assay (LLNA)
Routes of exposure	:	Skin contact
Species	:	Mouse

Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
6.0	03.12.2024	1078719-00019	Date of first issue: 18.11.2016

|| Result : negative

lambda-cyhalothrin (ISO):

|| Test Type : Magnusson-Kligman-Test
|| Routes of exposure : Dermal
|| Species : Guinea pig
|| Result : Not a skin sensitizer.

Germ cell mutagenicity

Not classified based on available information.

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 (vapor)
|| 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

Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
6.0	03.12.2024	1078719-00019	Date of first issue: 18.11.2016

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

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 (vapor)
	:	Method: OPPTS 870.3800
	:	Result: negative

Effects on fetal development	:	Test Type: Two-generation reproduction toxicity study
	:	Species: Rat
	:	Application Route: inhalation (vapor)
	:	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.

Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
6.0	03.12.2024	1078719-00019	Date of first issue: 18.11.2016

Effects on fetal development	Result: No effects on fertility. Remarks: Based on data from similar materials
	Test Type: Development Species: Rat Application Route: Oral General Toxicity Maternal: NOAEL: 10 mg/kg body weight Developmental Toxicity: LOAEL: 15 mg/kg body weight Result: No effects on fetal development., Reduced maternal body weight gain., Reduced fetal 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 fetal development., Reduced maternal body weight gain., Reduced fetal weight. Remarks: Based on data from similar materials

STOT-single exposure

Causes 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

Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
6.0	03.12.2024	1078719-00019	Date of first issue: 18.11.2016

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

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Decamethylcyclopentasiloxane:

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): > 16 µg/l
	Exposure time: 96 h
	Remarks: No toxicity at the limit of solubility.

Lambda-Cyhalothrin / Decamethylcyclopenta-siloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
6.0	03.12.2024	1078719-00019	Date of first issue: 18.11.2016

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
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

Lambda-Cyhalothrin / Decamethylcyclopentasiloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue:
6.0	03.12.2024	1078719-00019	30.09.2023
			Date of first issue: 18.11.2016

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

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

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Do not dispose of waste into sewer.
Dispose of in accordance with local regulations.

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.

Lambda-Cyhalothrin / Decamethylcyclopenta-siloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
6.0	03.12.2024	1078719-00019	Date of first issue: 18.11.2016

SECTION 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
Marine pollutant	: yes

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

Not applicable for product as supplied.

Domestic regulation**NOM-002-SCT**

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

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

Lambda-Cyhalothrin / Decamethylcyclopenta-siloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
6.0	03.12.2024	1078719-00019	Date of first issue: 18.11.2016

Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixture**

NOM-165-SEMARNAT-2013, Norm establishing a list of substances subject to report for the Registry of Emissions and Pollutant Transfer

Components	CAS-No.	MPU (kg/year)	Transfer/Release (kg/year)
lambda-cyhalothrin (ISO)	91465-08-6	2500 kg/year	100 kg/year

MPU: Applicable reporting threshold when the substance, pure or in mixture in a composition of more than 1% by weight, is used for industrial activities at facilities that are subject to report or are produced by them

Federal Law for the control of chemical precursors, : Not applicable
essential chemical products and machinery for
producing capsules, tablets and pills.

The ingredients of this product are reported in the following inventories:

AICS	: not determined
DSL	: not determined
IECSC	: not determined

SECTION 16. OTHER INFORMATION

Revision Date	: 03.12.2024
Date format	: dd.mm.yyyy

Full text of other abbreviations

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
NOM-010-STPS-2014	: Mexico. Norm NOM-010-STPS-2014 on Chemicals Polluting the Work Environment - Identification, Assessment and Control - Appendix 1 Occupational Exposure Limits
ACGIH / TWA	: 8-hour, time-weighted average
ACGIH / STEL	: Short-term exposure limit
NOM-010-STPS-2014 / VLE-	: Ceiling value

P

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

Lambda-Cyhalothrin / Decamethylcyclopenta-siloxane Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 30.09.2023
6.0	03.12.2024	1078719-00019	Date of first issue: 18.11.2016

Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; 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; TECI - 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

Sources of key data used to compile the Material 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.

The information is considered as correct, but not exhaustive, and will be used only as a guide, which is based in the current knowledge of the substance or mixture, and is applicable to proper safety precautions for the product.

MX / Z8