

## Lambda-Cyhalothrin / Piperonyl Butoxide Formulation

Version 4.0      Revision Date: 04.04.2023      SDS Number: 1366762-00018      Date of last issue: 01.10.2022  
Date of first issue: 01.03.2017

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### SECTION 1. IDENTIFICATION

Product name : Lambda-Cyhalothrin / Piperonyl Butoxide Formulation

#### Manufacturer or supplier's details

Company : MSD

Address : Talcahuano 750, 6th floor, Ciudad Autonoma  
Buenos Aires, Argentina C1013AAP

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

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### SECTION 2. HAZARDS IDENTIFICATION

#### GHS Classification

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 5

Acute toxicity (Dermal) : Category 5

Skin corrosion/irritation : Category 2

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

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- Hazard pictograms : 
- Signal Word : Warning
- Hazard Statements : H302 Harmful if swallowed.  
H313 + H333 May be harmful in contact with skin or if inhaled.  
H315 + H320 Causes skin and 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 vapors.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P273 Avoid release to the environment.  
P280 Wear protective gloves.
- Response:**  
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.  
P302 + P352 IF ON SKIN: Wash with plenty of water.  
P304 + P312 IF INHALED: 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.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
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.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

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### Components

Chemical name	CAS-No.	Concentration (% w/w)
Corn oil	8001-30-7	>= 90 -<= 100
2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether	51-03-6	>= 5 -< 10
lambda-cyhalothrin (ISO)	91465-08-6	>= 1 -< 2,5

### 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.  
 Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing 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 if swallowed.  
 May be harmful in contact with skin or if inhaled.  
 Causes skin and 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.

### SECTION 5. FIRE-FIGHTING 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 : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides  
 Nitrogen oxides (NO<sub>x</sub>)  
 Chlorine compounds

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Fluorine compounds

- 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.
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### 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.  
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.
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### SECTION 7. HANDLING AND STORAGE

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : Use only with adequate 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  
Do not eat, drink or smoke when using this product.

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- Conditions for safe storage : Take care to prevent spills, waste and minimize release to the environment.  
 : Keep in properly labeled containers.  
 : Store locked up.  
 : Store in accordance with the particular national regulations.
- Materials to avoid : 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
Corn oil	8001-30-7	CMP (Mist)	10 mg/m <sup>3</sup>	AR OEL
2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether	51-03-6	TWA	4 mg/m <sup>3</sup> (OEB 1)	Internal
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

- 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 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.

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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.

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.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : clear, light yellow

Odor : mild, oily

Odor Threshold : No data available

pH : 6,16

Melting point/freezing point : No data available

Initial boiling point and boiling range : No data available

Flash point : 105,5 °C

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : Not applicable

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : 0,9326

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Density : No data available

Solubility(ies)  
Water solubility : No data available

Partition coefficient: n-  
octanol/water : No data available

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity  
Viscosity, kinematic : No data available

Explosive properties : Not explosive

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

Molecular weight : Not applicable

Particle size : Not applicable

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### SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reac-  
tions : Can react with strong oxidizing agents.

Conditions to avoid : None known.

Incompatible materials : Oxidizing agents

Hazardous decomposition  
products : No hazardous decomposition products are known.

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### SECTION 11. TOXICOLOGICAL INFORMATION

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

#### Acute toxicity

Harmful if swallowed.  
May be harmful in contact with skin or if inhaled.

#### Product:

Acute oral toxicity : LD50 (Rat): 2.000 mg/kg  
TDL0 (Rat): 300 mg/kg  
Remarks: No mortality observed at this dose.

Acute inhalation toxicity : Acute toxicity estimate: 6 mg/l

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Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Calculation method

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg

### Components:

#### **Corn oil:**

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 401  
Remarks: Based on data from similar materials

#### **2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether:**

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 423

Acute inhalation toxicity : LC50 (Rat): > 5,2 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 402

#### **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**

Causes skin irritation.

### Product:

Species : Rabbit  
Result : irritating

### Components:

#### **Corn oil:**

Species : Rabbit  
Method : OECD Test Guideline 404



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Result : No skin irritation  
Remarks : Based on data from similar materials

### 2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether:

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation

Assessment : Repeated exposure may cause skin dryness or cracking.

### 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:

##### Corn oil:

Species : Rabbit  
Result : No eye irritation  
Method : OECD Test Guideline 405  
Remarks : Based on data from similar materials

### 2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether:

Species : Rabbit  
Result : Irritation to eyes, reversing within 21 days  
Method : OECD Test Guideline 405

### 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:

Test Type : Local lymph node assay (LLNA)  
Routes of exposure : Dermal

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Assessment : Does not cause skin sensitization.  
 Result : negative

: Magnusson-Kligman-Test  
 : Dermal  
 : Not a skin sensitizer.

### Components:

#### **Corn oil:**

Test Type : Human repeat insult patch test (HRIPT)  
 Routes of exposure : Skin contact  
 Result : negative

#### **2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether:**

Test Type : Maximization Test  
 Routes of exposure : Skin contact  
 Species : Guinea pig  
 Method : OECD Test Guideline 406  
 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:

#### **Corn oil:**

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

#### **2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether:**

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

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	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

### Carcinogenicity

Not classified based on available information.

### Components:

#### 2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether:

Species	: Rat
Application Route	: Ingestion
Exposure time	: 107 weeks
Method	: OECD Test Guideline 451
Result	: negative

#### 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:

#### 2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether:

Effects on fertility	: Test Type: Two-generation reproduction toxicity study
	Species: Rat
	Application Route: Ingestion
	Result: negative
Effects on fetal development	: Test Type: Embryo-fetal development
	Species: Rat
	Application Route: Ingestion
	Result: negative

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### 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 fetal development : 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

May cause damage to organs (Nervous system).

### Components:

#### 2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether:

|| Assessment : May cause respiratory irritation.

### 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:

#### Corn oil:

|| Species : Rat  
 || NOAEL : > 300 mg/kg  
 || Application Route : Ingestion

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Exposure time : 28 Days  
 Remarks : Based on data from similar materials

### 2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether:

Species : Rat  
 NOAEL : 1.323 mg/kg  
 Application Route : Ingestion  
 Exposure time : 7 Weeks

### 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  
 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

#### 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.

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Eye contact	: Symptoms: Eye irritation
Ingestion	: Symptoms: Gastrointestinal disturbance

### SECTION 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

##### Components:

##### **Corn oil:**

Toxicity to fish	: LL50 (Danio rerio (zebra fish)): > 100 mg/l Exposure time: 96 h Method: ISO 7346/1 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	: EL50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Test substance: Water Accommodated Fraction Method: Directive 67/548/EEC, Annex V, C.2. Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	: EL50 (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: Directive 67/548/EEC, Annex V, C.3. Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOELR (Daphnia magna (Water flea)): > 1 mg/l Exposure time: 21 d Test substance: Water Accommodated Fraction Method: OECD Test Guideline 211 Remarks: Based on data from similar materials

##### **2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether:**

Toxicity to fish	: LC50 (Cyprinodon variegatus (sheepshead minnow)): 3,94 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 0,51 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	: ErC50 (Pseudokirchneriella subcapitata (green algae)): 3,89 mg/l Exposure time: 72 h Method: OECD Test Guideline 201  NOEC (Pseudokirchneriella subcapitata (green algae)): 0,824 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

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M-Factor (Acute aquatic toxicity)	:	1
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 0,18 mg/l Exposure time: 35 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0,03 mg/l Exposure time: 21 d
M-Factor (Chronic aquatic toxicity)	:	1
Toxicity to microorganisms	:	EC50: > 1.000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

### 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
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:

#### Corn oil:

Biodegradability	:	Result: Readily biodegradable. Remarks: Based on data from similar materials
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### 2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether:

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 0 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D

### Bioaccumulative potential

#### Components:

##### Corn oil:

Partition coefficient: n-octanol/water : log Pow: > 4  
Method: OECD Test Guideline 117

### 2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether:

Partition coefficient: n-octanol/water : log Pow: 5

##### 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 : 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.

## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### UNRTDG

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.



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(2-(2-butoxyethoxy)ethyl 6-propylpiperonyl ether, lambda-cyhalothrin (ISO))

Class : 9  
Packing group : III  
Labels : 9

### IATA-DGR

UN/ID No. : UN 3082  
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.  
(2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether, 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.  
(2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether, 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.

### 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.

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## SECTION 15. REGULATORY INFORMATION

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

Argentina. Carcinogenic Substances and Agents Registry. : Not applicable

Control of precursors and essential chemicals for the preparation of drugs. : Not applicable

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

AICS : not determined

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DSL : not determined

IECSC : not determined

### SECTION 16. OTHER INFORMATION

Revision Date : 04.04.2023  
Date format : dd.mm.yyyy

#### Further information

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.

#### Full text of other abbreviations

AR OEL : Argentina. Occupational Exposure Limits

AR OEL / CMP : TLV (Threshold Limit Value)

AIIIC - 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 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 Recom-

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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.

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