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 C1013AEP
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

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Acute toxicity (Oral) : Category 4
Acute toxicity (Inhalation) : Category 5
Acute toxicity (Dermal) : Category 5
Skin irritation : Category 2
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
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**

<table>
<thead>
<tr>
<th>Substance / Mixture</th>
<th>Mixture</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
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</thead>
<tbody>
<tr>
<td>Corn oil</td>
<td>8001-30-7</td>
<td>&gt;= 90 - &lt;= 100</td>
</tr>
<tr>
<td>2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether</td>
<td>51-03-6</td>
<td>&gt;= 5 - &lt; 10</td>
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<tr>
<td>lambda-cyhalothrin (ISO)</td>
<td>91465-08-6</td>
<td>&gt;= 1 - &lt; 2,5</td>
</tr>
</tbody>
</table>
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 (CO2)
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 (NOx)
Chlorine compounds
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.
### SECTION 6. ACCIDENTAL RELEASE MEASURES

**Special protective equipment for fire-fighters**

In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

**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.

### 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. Take care to prevent spills, waste and minimize release to the environment.

**Conditions for safe storage**

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 Organic peroxides
SAFETY DATA SHEET

Lambda-Cyhalothrin / Piperonyl Butoxide Formulation

Explosives
Gases

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
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<tbody>
<tr>
<td>Corn oil</td>
<td>8001-30-7</td>
<td>CMP (Mist)</td>
<td>10 mg/m³</td>
<td>AR OEL</td>
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<tr>
<td>2-(2-Butoxyethoxy)ethyl 6-propyl/piperonyl ether</td>
<td>51-03-6</td>
<td>TWA</td>
<td>4 mg/m³ (OEB 1)</td>
<td>Internal</td>
</tr>
<tr>
<td>lambda-cyhalothrin (ISO)</td>
<td>91465-08-6</td>
<td>TWA</td>
<td>5 µg/m³ (OEB 4)</td>
<td>Internal</td>
</tr>
</tbody>
</table>

Further information: Skin

- Wipe limit: 50 µg/100 cm²

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.

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
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

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : Can react with strong oxidizing agents.
Conditions to avoid : None known.
Incompatible materials : Oxidizing agents
Hazardous decomposition products : No hazardous decomposition products are known.

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
  TDLo (Rat): 300 mg/kg
  Remarks: No mortality observed at this dose.
Acute inhalation toxicity : Acute toxicity estimate: 6 mg/l
  Exposure time: 4 h
  Test atmosphere: dust/mist
  Method: Calculation method
Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg

Components:
Corn oil:
SAFETY DATA SHEET

Lambda-Cyhalothrin / Piperonyl Butoxide
Formulation

Version: 3.6
Revision Date: 27.08.2021
SDS Number: 1366762-00014
Date of last issue: 30.04.2021
Date of first issue: 01.03.2017

Acute oral toxicity: LD50 (Rat): > 5.000 mg/kg

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:
2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Lambda-cyhalothrin (ISO):
Species: Rabbit
Result: No skin irritation

Serious eye damage/eye irritation
Causes eye irritation.
SAFETY DATA SHEET

Lambda-Cyhalothrin / Piperonyl Butoxide
Formulation

Version 3.6  Revision Date: 27.08.2021  SDS Number: 1366762-00014  Date of last issue: 30.04.2021  Date of first issue: 01.03.2017

Product:
Species : Rabbit
Result : Mild eye irritation

Components:
2-(2-Butoxyethoxy)ethyl 6-propylpiperonyl ether:
Species : Rabbit
Result : No eye irritation
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
Assessment : Does not cause skin sensitization.
Result : negative

Components:
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:

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
  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

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

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:**

**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.
- **Eye contact:** Symptoms: Eye irritation
- **Ingestion:** Symptoms: Gastrointestinal disturbance

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Components:**

**Corn oil:**
- **Toxicity to fish:** LC0 (Danio rerio (zebra fish)): > 100 mg/l
  Exposure time: 96 h
  Remarks: Based on data from similar materials

- **Toxicity to daphnia and other aquatic invertebrates:** EC0 (Daphnia magna (Water flea)): > 100 mg/l
  Exposure time: 48 h
  Remarks: Based on data from similar materials

- **Toxicity to algae/aquatic plants:** EL50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
  Exposure time: 72 h
  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

**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

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
Remarks: No data available

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.
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.
(2-(2-butoxyethoxy)ethyl 6-propylpiperonyl ether, lambda-cyhalothrin (ISO))
Class: 9
# SAFETY DATA SHEET

**Lambda-Cyhalothrin / Piperonyl Butoxide Formulation**

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date</th>
<th>SDS Number</th>
<th>Date of last issue</th>
<th>Date of first issue</th>
</tr>
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<tr>
<td>3.6</td>
<td>27.08.2021</td>
<td>1366762-00014</td>
<td>30.04.2021</td>
<td>01.03.2017</td>
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- **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))

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<th>Labels</th>
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<th>Packing instruction (passenger aircraft)</th>
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### 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))

<table>
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<th>Packing group</th>
<th>Labels</th>
<th>EmS Code</th>
<th>Marine pollutant</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>9</td>
<td>F-A, S-F</td>
<td>yes</td>
</tr>
</tbody>
</table>

**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.

## 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
- **DSL**: not determined
SAFETY DATA SHEET

Lambda-Cyhalothrin / Piperonyl Butoxide Formulation

SECTION 16. OTHER INFORMATION

Further information
Sources of key data used to compile the Material Safety Data Sheet:

Full text of other abbreviations
- AR OEL: Argentina. Occupational Exposure Limits
- AR OEL / CMP: TLV (Threshold Limit Value)
- AllIC: 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
- IC50: Half maximal inhibitory concentration
- ICAO: International Civil Aviation Organization
- IECSC: Inventory of Existing Chemical Substances in China
- 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
- LDL0: 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
- 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
- vPvB: Very Persistent and Very Bioaccumulative
- WHMIS: Workplace Hazardous Materials Information System

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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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