SAFETY DATA SHEET

Lambda-Cyhalothrin / Piperonyl Butoxide Formulation

Version 3.0
Revision Date: 2021/04/09
SDS Number: 1366464-00012
Date of last issue: 2020/10/10
Date of first issue: 2017/03/01

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Lambda-Cyhalothrin / Piperonyl Butoxide Formulation

Manufacturer or supplier's details
Company: MSD
Address: JL Raya Pandaan KM. 48
Pandaan, Jawa Timur - Indonesia
Telephone: 908-740-4000
Emergency telephone number: 1-908-423-6000
E-mail address: EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use
Recommended use: Veterinary product

2. HAZARDS IDENTIFICATION

GHS Classification
Acute toxicity (Oral): Category 4
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
Hazard pictograms:

Signal word: Warning
Hazard statements: H302 Harmful if swallowed.
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 vapours.
- 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.
- 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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Substance / Mixture | Mixture |

<table>
<thead>
<tr>
<th>Components</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-(2-butoxyethoxy)ethyl 6-propyl/piperonyl ether</td>
<td>51-03-6</td>
<td>&gt;= 2.5 -&lt; 10</td>
</tr>
<tr>
<td>Lambda-cyhalothrin (ISO)</td>
<td>91465-08-6</td>
<td>&gt;= 1 -&lt; 2.5</td>
</tr>
</tbody>
</table>

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.
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. 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.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water spray
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media: None known.

Specific hazards during firefighting: 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.

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
SAFETY DATA SHEET

Lambda-Cyhalothrin / Piperonyl Butoxide Formulation

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Date of first issue: 2017/03/01

Environmental precautions:
Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up:
Soak up with inert absorbent material.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

7. HANDLING AND STORAGE

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 vapours.
Do not swallow.
Do not get in eyes.
Wash skin thoroughly after handling.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment.
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 labelled 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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components 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>
</tr>
</thead>
<tbody>
<tr>
<td>2-(2-butoxyethoxy)ethyl 6-propylpiperonyl ether</td>
<td>51-03-6</td>
<td>TWA</td>
<td>4 mg/m3 (OEB 1)</td>
<td>Internal</td>
</tr>
</tbody>
</table>
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### 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 vapour type

#### Hand protection

Material: Chemical-resistant gloves

Remarks: Consider double gloving.

#### Eye protection

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

#### Skin and body protection

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

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Appearance

liquid

#### Colour

clear, light yellow

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Odour: mild, oily
Odour 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
Vapour pressure: No data available
Relative vapour 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
Auto-ignition 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
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.

11. TOXICOLOGICAL INFORMATION

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

Acute toxicity
Harmful if swallowed.

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: > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity: LD50 (Rat): > 2,000 mg/kg

Components:

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.

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 sensitisation

Skin sensitisation
Not classified based on available information.

Respiratory sensitisation
Not classified based on available information.

Product:

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Exposure routes</th>
<th>Assessment</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local lymph node assay (LLNA)</td>
<td>Dermal</td>
<td>Does not cause skin sensitisation.</td>
<td>negative</td>
</tr>
<tr>
<td>Magnusson-Kligman-Test</td>
<td>Dermal</td>
<td>Not a skin sensitizer.</td>
<td></td>
</tr>
</tbody>
</table>

Components:

2-(2-butoxyethoxy)ethyl 6-propylpiperonyl ether:

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Exposure routes</th>
<th>Species</th>
<th>Method</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximisation Test</td>
<td>Skin contact</td>
<td>Guinea pig</td>
<td>OECD Test Guideline 406</td>
<td>negative</td>
</tr>
</tbody>
</table>

lambda-cyhalothrin (ISO):

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Exposure routes</th>
<th>Species</th>
<th>Method</th>
<th>Result</th>
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<td>Magnusson-Kligman-Test</td>
<td>Dermal</td>
<td>Guinea pig</td>
<td>Not a skin sensitizer.</td>
<td></td>
</tr>
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</table>

Germ cell mutagenicity
Not classified based on available information.

Components:

2-(2-butoxyethoxy)ethyl 6-propylpiperonyl ether:

Genotoxicity in vitro:

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bacterial reverse mutation assay (AMES)</td>
<td>negative</td>
</tr>
</tbody>
</table>

lambda-cyhalothrin (ISO):

Genotoxicity in vitro:

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<tr>
<th>Test Type</th>
<th>Result</th>
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<tr>
<td>Bacterial reverse mutation assay (AMES)</td>
<td>negative</td>
</tr>
</tbody>
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<table>
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<tr>
<th>Test Type</th>
<th>Test system</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chromosomal aberration</td>
<td>Human lymphocytes</td>
<td>negative</td>
</tr>
<tr>
<td>unscheduled DNA synthesis assay</td>
<td>rat hepatocytes</td>
<td>negative</td>
</tr>
</tbody>
</table>
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 foetal development:
Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Result: negative
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<td>2021/04/09</td>
<td>1366464-00012</td>
<td>2020/10/10</td>
<td>2017/03/01</td>
</tr>
</tbody>
</table>

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

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

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

**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):**
**SAFETY DATA SHEET**

**Lambda-Cyhalothrin / Piperonyl Butoxide**

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<td>2017/03/01</td>
</tr>
</tbody>
</table>

### Species and Toxicity

<table>
<thead>
<tr>
<th>Species</th>
<th>NOAEL (mg/kg)</th>
<th>LOAEL (mg/kg)</th>
<th>Application Route</th>
<th>Exposure time</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dog</td>
<td>2.5</td>
<td>12.5</td>
<td>oral (feed)</td>
<td>90 d</td>
<td>reduced body weight gain, reduced food consumption</td>
</tr>
<tr>
<td>Rat</td>
<td>10</td>
<td>50</td>
<td>Dermal</td>
<td>21 d</td>
<td>Nervous system</td>
</tr>
<tr>
<td>Rat</td>
<td>0.08</td>
<td>0.9</td>
<td>Inhalation</td>
<td>21 d</td>
<td>Nervous system</td>
</tr>
<tr>
<td>Dog</td>
<td>0.1</td>
<td>0.5</td>
<td>Oral</td>
<td>1 yr</td>
<td>Nervous system</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Aspiration toxicity</td>
</tr>
</tbody>
</table>

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

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Components:**

**2-(2-butoxyethoxy)ethyl 6-propylpiperonyl ether:**

- Toxicity to fish
  - LC50 (Cyprinodon variegatus (sheepshead minnow)): 3.94
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:
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:
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

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.
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
- **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.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture
Minister of Industry Regulation No. 23/M-IND/PER/4/2013 concerning the Revision of Minister of Industry Regulation No. 87/M-IND/PER/9/2009 concerning Globally Harmonized System of Classification and Labelling of Chemicals.

Regulation of the Minister of Health No. 472 of 1996 on the Safeguarding of Substances Hazardous to Health
Hazardous substances that must be registered : Not applicable

Government Regulation No. 74 of 2001 on the Management of Hazardous and Toxic Substances
Hazardous substances approved for use : Not applicable
Prohibited substances : Not applicable
Restricted substances : Not applicable

Regulation of the Minister of Trade No. 44 of 2009 on Procurement, Distribution and Supervision of Hazardous Materials
Type of Hazardous Materials Restricted to Import, Distribution and Supervision : Not applicable

The components of this product are reported in the following inventories:
AICS : not determined
DSL : not determined
IECSC : not determined

16. OTHER INFORMATION

Further information

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

Date format : yyyy/mm/dd

Full text of other abbreviations

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
SAFETY DATA SHEET

Lambda-Cyhalothrin / Piperonyl Butoxide Formulation

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