SAFETY DATA SHEET

Deltamethrin Liquid Formulation

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Deltamethrin Liquid Formulation

Manufacturer or supplier’s details
Company: MSD
Address: Rua Coronel Bento Soares, 530
           Cruzeiro - Sao Paulo - Brazil  CEP 12730-340
Telephone: 908-740-4000
Emergency telephone: 1-908-423-6000
E-mail address: EHSDATASTEWARD@msd.com
Telefax: 908-735-1496

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

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification in accordance with ABNT NBR 14725 Standard
Acute toxicity (Oral): Category 4
Serious eye damage: Category 1
Skin sensitization: Category 1
Reproductive toxicity: Category 2

Specific target organ toxicity - repeated exposure (Oral): Category 2 (Central nervous system, Immune system)
Specific target organ toxicity - repeated exposure (Inhalation): Category 2 (Central nervous system)
Short-term (acute) aquatic hazard: Category 1
Long-term (chronic) aquatic hazard: Category 1
SAFETY DATA SHEET

Deltamethrin Liquid Formulation

Version 4.0   Revision Date: 23.03.2020   SDS Number: 1559905-00008   Date of last issue: 13.09.2019
Date of first issue: 25.04.2017

GHS label elements in accordance with ABNT NBR 14725 Standard

<table>
<thead>
<tr>
<th>Hazard pictograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Pictogram 1]</td>
</tr>
</tbody>
</table>

Signal Word : Danger

Hazard Statements : H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H361f Suspected of damaging fertility. Suspected of damaging the unborn child.
H373 May cause damage to organs (Central nervous system, Immune system) through prolonged or repeated exposure if swallowed.
H373 May cause damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements : Prevention:
P201 Obtain special instructions before use.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P391 Collect spillage.

Other hazards which do not result in classification
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)</td>
<td>9002-93-1</td>
<td>Acute toxicity (Oral), Category 4</td>
<td>&gt;= 50 &lt; 70</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Serious eye damage, Category 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Short-term (acute) aquatic hazard, Category 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Long-term (chronic) aquatic hazard,</td>
<td></td>
</tr>
<tr>
<td>Category</td>
<td>Substance</td>
<td>Acute toxicity (Oral), Category 3</td>
<td>Acute toxicity (Inhalation), Category 3</td>
</tr>
<tr>
<td>----------</td>
<td>-----------</td>
<td>----------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>2</td>
<td>Deltamethrin (ISO)</td>
<td>52918-63-5</td>
<td>&gt;= 3 -&lt; 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 soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**In case of eye contact**: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention immediately.

**If swallowed**: If swallowed, DO NOT induce vomiting.
## 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)  
- Bromine 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.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:**  
Use personal protective equipment.  
Follow safe handling advice and personal protective equipment recommendations.

**Environmental precautions:**  
Discharge into the environment must be avoided.  
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 spills cannot be contained.

**Methods and materials for:**  
Soak up with inert absorbent material.
Manufacturer: MSD

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Deltamethrin Liquid Formulation

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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 vapors or spray mist.
Do not swallow.
Do not get in eyes.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Keep container tightly closed.
Take care to prevent spills, waste and minimize release to the environment.

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.
Store in accordance with the particular national regulations.

Materials to avoid:
Do not store with the following product types:
Strong oxidizing agents
Organic peroxides
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</th>
<th>Control parameter</th>
<th>Basis</th>
</tr>
</thead>
</table>

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Deltamethrin Liquid Formulation

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<table>
<thead>
<tr>
<th>(Form of exposure)</th>
<th>ters / Permissible concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deltamethrin (ISO) 52918-63-5</td>
<td>TWA 15 µg/m3 (OEB 3) Internal</td>
</tr>
<tr>
<td>Further information: DSEN, Skin Wipe limit</td>
<td>150 µg/100 cm² Internal</td>
</tr>
</tbody>
</table>

**Engineering measures**

Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., dripless quick connections).

All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.

Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices).

Minimize open handling.

**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:** Particulates 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:** colorless
- **Odor:** odorless
- **Odor Threshold:** No data available
- **pH:** 3.4 - 4 (20 °C)
- **Melting point/freezing point:** No data available
**SAFETY DATA SHEET**

**Deltamethrin Liquid Formulation**

| Initial boiling point and boiling range | No data available |
| Flash point                             | No data available |
| Evaporation rate                        | No data available |
| Flammability (solid, gas)               | Not applicable |
| Flammability (liquids)                  | No data available |
| 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                        | No data available |
| Density                                 | No data available |
| Solubility(ies)                         | No data available |
| Water solubility                        | No data available |
| Partition coefficient: n-octanol/water  | No data available |
| Autoignition temperature                | No data available |
| Decomposition temperature               | No data available |
| Viscosity                               | No data available |
| 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.

Product:
- Acute oral toxicity: Acute toxicity estimate: 956,51 mg/kg
  Method: Calculation method
- Acute inhalation toxicity: Acute toxicity estimate: > 10 mg/l
  Exposure time: 4 h
  Test atmosphere: dust/mist
  Method: Calculation method

Components:
- Alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxy(poly(oxy-1,2-ethanediyl):
  - Acute oral toxicity: LD50 (Rat): 1.900 - 5.000 mg/kg
    Remarks: Based on data from similar materials
  - Acute dermal toxicity: LD50 (Rabbit): > 3.000 mg/kg
    Remarks: Based on data from similar materials

- Deltamethrin (ISO):
  - Acute oral toxicity: LD50 (Rat): 66,7 mg/kg
    LD50 (Rat): 9 - 139 mg/kg
    LD50 (Mouse): 19 - 34 mg/kg
  - Acute inhalation toxicity: LC50 (Rat): 0,8 mg/l
    Exposure time: 2 h
    Test atmosphere: dust/mist
  - Acute dermal toxicity: LD50 (Rabbit): 2.000 mg/kg
    LD50 (Rat): > 800 mg/kg
  - Acute toxicity (other routes of administration): LD50 (Rat): 2.5 mg/kg
    Application Route: Intravenous
    LD50 (Mouse): 10 mg/kg
    Application Route: Intraperitoneal

Skin corrosion/irritation: Not classified based on available information.
Components:

- **Alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl):**
  - **Result**: No skin irritation

- **Deltamethrin (ISO):**
  - **Species**: Rabbit
  - **Result**: No skin irritation

**Serious eye damage/eye irritation**

- Causes serious eye damage.

Components:

- **Alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl):**
  - **Result**: Irreversible effects on the eye

- **Deltamethrin (ISO):**
  - **Species**: Rabbit
  - **Result**: Moderate eye irritation

**Respiratory or skin sensitization**

**Skin sensitization**

- May cause an allergic skin reaction.

**Respiratory sensitization**

- Not classified based on available information.

Components:

- **Deltamethrin (ISO):**
  - **Test Type**: Maximization Test
  - **Routes of exposure**: Dermal
  - **Species**: Guinea pig
  - **Result**: negative

  - **Human repeat insult patch test (HRIPT)**
    - **Species**: Humans
    - **Result**: positive

**Germ cell mutagenicity**

- Not classified based on available information.

Components:

- **Deltamethrin (ISO):**
  - **Genotoxicity in vitro**
    - **Test Type**: Bacterial reverse mutation assay (AMES)
      - **Result**: negative

    - **Test Type**: DNA Repair
      - **Test system**: Escherichia coli
Result: negative

Test Type: Chromosomal aberration
Test system: Chinese hamster ovary cells
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster lung cells
Concentration: LOAEL: 20 mg/kg
Result: positive

Genotoxicity in vivo:

Test Type: Micronucleus test
Species: Mouse
Application Route: Oral
Result: negative

Test Type: dominant lethal test
Species: Mouse
Application Route: Oral
Result: negative

Test Type: sister chromatid exchange assay
Species: Mouse
Cell type: Bone marrow
Application Route: Oral
Result: negative

Carcinogenicity

Not classified based on available information.

Components:

Deltamethrin (ISO):

Species: Mouse, male and female
Application Route: oral (feed)
Exposure time: 104 weeks
NOAEL: 8 mg/kg body weight
LOAEL: 4 mg/kg body weight
Result: positive
Target Organs: Lymph nodes

Species: Rat, male and female
Application Route: oral (feed)
Exposure time: 2 Years
Result: negative

Species: Dog, male and female
Application Route: oral (feed)
Exposure time: 2 Years
NOAEL: 1 mg/kg body weight
Result: negative

Reproductive toxicity

Suspected of damaging fertility. Suspected of damaging the unborn child.
Components:

Deltamethrin (ISO):

Effects on fertility : Test Type: Three-generation reproduction toxicity study
Species: Rat
Application Route: oral (feed)
Early Embryonic Development: NOAEL: 50 mg/kg body weight
Symptoms: No effects on fertility, Embryo-fetal toxicity.
Remarks: Significant toxicity observed in testing

Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Oral
Early Embryonic Development: LOAEL: 84 - 149 mg/kg body weight
Symptoms: No effects on fertility, Embryo-fetal toxicity.

Test Type: Fertility
Species: Rat, male
Application Route: Oral
Fertility: LOAEL: 1 mg/kg body weight
Symptoms: Effects on fertility.
Target Organs: Testes

Effects on fetal development : Test Type: Development
Species: Mouse
Application Route: oral (gavage)
Developmental Toxicity: LOAEL: 1 mg/kg body weight
Result: Skeletal malformations.
Remarks: Maternal toxicity observed.

Test Type: Development
Species: Rat, female
Developmental Toxicity: NOAEL: 10 mg/kg body weight
Symptoms: No effects on fetal development.

Test Type: Development
Species: Rabbit, female
Application Route: oral (gavage)
Developmental Toxicity: NOAEL: 16 mg/kg body weight
Symptoms: No effects on fetal development.

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

STOT-single exposure
Not classified based on available information.

Components:

Deltamethrin (ISO):

Assessment : May cause respiratory irritation.
STOT-repeated exposure

May cause damage to organs (Central nervous system, Immune system) through prolonged or repeated exposure if swallowed.

May cause damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.

Components:

Deltamethrin (ISO):

Routes of exposure: Ingestion
Target Organs: Central nervous system, Immune system
Assessment: Causes damage to organs through prolonged or repeated exposure.

Routes of exposure: inhalation (dust/mist/fume)
Target Organs: Central nervous system
Assessment: Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

Deltamethrin (ISO):

Species: Rat, male and female
NOAEL: 1 mg/kg
LOAEL: 2.5 mg/kg
Application Route: Oral
Exposure time: 13 Weeks
Target Organs: Nervous system
Symptoms: hyperexcitability

Species: Rat
LOAEL: 3 mg/m3
Application Route: inhalation (dust/mist/fume)
Test atmosphere: dust/mist
Exposure time: 2 wk / 5 d/wk / 6 h/d
Symptoms: Local irritation, respiratory tract irritation

Species: Dog
NOAEL: 0.1 mg/kg
LOAEL: 1 mg/kg
Application Route: Oral
Exposure time: 13 Weeks
Target Organs: Nervous system
Symptoms: Dilatation of the pupil, Vomiting, Tremors, Diarrhea, Salivation

Species: Rat
NOAEL: 14 mg/kg
LOAEL: 54 mg/kg
Application Route: Oral
Exposure time: 91 d
Target Organs: Nervous system

Species: Mouse
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Deltamethrin Liquid Formulation

<table>
<thead>
<tr>
<th>Version</th>
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<th>Date of first issue:</th>
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</thead>
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<tr>
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<td>1559905-00008</td>
<td>13.09.2019</td>
<td>25.04.2017</td>
</tr>
</tbody>
</table>

- **LOAEL**: 6 mg/kg
- **Application Route**: Oral
- **Exposure time**: 12 Weeks
- **Target Organs**: Immune system
- **Symptoms**: immune system effects

**Aspiration toxicity**

- Not classified based on available information.

**Experience with human exposure**

**Components:**

**Deltamethrin (ISO):**

- **Inhalation**
  - Symptoms: respiratory tract irritation, Dizziness, Sweating, Headache, Nausea, Vomiting, anorexia, Fatigue, tingling, Palpitation, Blurred vision, muscle twitching
- **Skin contact**
  - Symptoms: Skin irritation, Erythema, pruritis, Headache, Nausea, Vomiting, Dizziness, tingling, Sweating, muscle twitching, Blurred vision, Fatigue, anorexia, Allergic reactions
- **Ingestion**
  - Symptoms: muscle pain, Small pupils

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Components:**

**Alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxy-poly(oxy-1,2-ethanediyl):**

- **Toxicity to fish**
  - LC50 (Pimephales promelas (fathead minnow)): 4 - 8,9 mg/l
  - Exposure time: 96 h
  - Remarks: Based on data from similar materials

- **Toxicity to daphnia and other aquatic invertebrates**
  - EC50 (Daphnia magna (Water flea)): 18 - 26 mg/l
  - Exposure time: 48 h
  - Remarks: Based on data from similar materials

- **Toxicity to microorganisms**
  - IC50: 5.000 mg/l
  - Exposure time: 16 h

**Deltamethrin (ISO):**

- **Toxicity to fish**
  - LC50 (Cyprinodon variegatus (sheepshead minnow)): 0,00048 mg/l
  - Exposure time: 96 h

  - LC50 (Oncorhynchus mykiss (rainbow trout)): 0,00039 mg/l
  - Exposure time: 96 h

- **Toxicity to daphnia and other aquatic invertebrates**
  - EC50 (Mysidopsis bahia (opossum shrimp)): 0,0037 µg/l
  - Exposure time: 48 h

  - EC50 (Daphnia magna (Water flea)): 0,0035 mg/l
  - Exposure time: 48 h
### Safety Data Sheet

**Deltamethrin Liquid Formulation**

<table>
<thead>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**Toxicity to algae/aquatic plants**

<table>
<thead>
<tr>
<th>LC50 (Gammarus fasciatus (freshwater shrimp)): 0.0003 μg/l Exposure time: 96 h</th>
</tr>
</thead>
</table>

**Toxicity to algae/aquatic plants**

<table>
<thead>
<tr>
<th>EC50 (Pseudokirchneriella subcapitata (green algae)): &gt; 9.1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility.</th>
</tr>
</thead>
</table>

**M-Factor (Acute aquatic toxicity)**: 1.000.000

**Toxicity to fish (Chronic toxicity)**

<table>
<thead>
<tr>
<th>NOEC (Pimephales promelas (fathead minnow)): 0.000022 mg/l Exposure time: 36 d</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>NOEC (Pimephales promelas (fathead minnow)): 0.000017 mg/l Exposure time: 260 d</th>
</tr>
</thead>
</table>

**Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)**

<table>
<thead>
<tr>
<th>NOEC (Daphnia magna (Water flea)): 0.0041 μg/l Exposure time: 21 d</th>
</tr>
</thead>
</table>

**M-Factor (Chronic aquatic toxicity)**: 1.000.000

### Persistence and degradability

**Components:**

**Alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl):**

<table>
<thead>
<tr>
<th>Biodegradability: Biodegradation: &gt; 60 % Exposure time: 28 d Method: OECD Test Guideline 301B</th>
</tr>
</thead>
</table>

**Result:** Not readily biodegradable.  
**Biodegradation:** 36 %  
**Exposure time:** 28 d  
**Method:** Closed Bottle test

**Deltamethrin (ISO):**

<table>
<thead>
<tr>
<th>Stability in water: Hydrolysis: 0 %(30 d)</th>
</tr>
</thead>
</table>

### Bioaccumulative potential

**Components:**

**Alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl):**

<table>
<thead>
<tr>
<th>Partition coefficient: n-octanol/water: log Pow: 2,7</th>
</tr>
</thead>
</table>

**Deltamethrin (ISO):**

<table>
<thead>
<tr>
<th>Bioaccumulation: Species: Lepomis macrochirus (Bluegill sunfish) Bioconcentration factor (BCF): 1.800</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Partition coefficient: n-octanol/water: log Pow: 4,6</th>
</tr>
</thead>
</table>
Components:

Deltamethrin (ISO):

Distribution among environmental compartments: log Koc: 7.2

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. (Deltamethrin (ISO), Alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl))
Class: 9
Packing group: III
Labels: 9

IATA-DGR
UN/ID No.: UN 3082
Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Deltamethrin (ISO), Alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl))
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. (Deltamethrin (ISO), Alpha-(4-(1,1,3,3-
Tetramethylbutyl(phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl))

**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**

**ANTT**

- **UN number**: UN 3082
- **Proper shipping name**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Deltamethrin (ISO), Alpha-(4-(1,1,3,3-Tetramethylbutyl)phenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl))

**Class**: 9

**Packing group**: III

**Labels**: 9

**Hazard Identification Number**: 90

**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**

- National List of Carcinogenic Agents for Humans - (LINACH): Not applicable
- Brazil. List of chemicals controlled by the Federal Police: Not applicable

**International Regulations**

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

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

**SECTION 16. OTHER INFORMATION**

**Further information**
SAFETY DATA SHEET

Deltamethrin Liquid Formulation

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

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

AICS - Australian Inventory of Chemical Substances; 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 Standardisation; 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; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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