SECTON 1. IDENTIFICATION

Product name: Deltamethrin Pour-On Formulation

Manufacturer or supplier's details

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

Recommended use of the chemical and restrictions on use

Recommended use: Veterinary product
Restrictions on use: Not applicable

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin sensitization: Category 1
Reproductive toxicity: Category 2

GHS label elements

Signal Word: Warning
Precautionary Statements: Prevention:
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P261 Avoid breathing mist or vapors.
- P272 Contaminated work clothing must not be allowed out of the workplace.
- P280 Wear protective gloves, protective clothing, eye protection and face protection.

Response:
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P308 + P313 IF exposed or concerned: Get medical attention.
- P333 + P313 If skin irritation or rash occurs: Get medical attention.
Deltamethrin Pour-On Formulation

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene glycol</td>
<td>57-55-6</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>Deltamethrin (ISO)</td>
<td>52918-63-5</td>
<td>&gt;= 0.1 - &lt; 1</td>
</tr>
</tbody>
</table>

Actual concentration is withheld as a trade secret.

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 : Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting. Get medical attention. Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and delayed : May cause an allergic skin reaction. Suspected of damaging fertility. Suspected of damaging the unborn child. This product contains a pyrethroid. Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning.

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

Specific extinguishing methods: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

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

SECTION 6. ACCIDENTAL RELEASE MEASURES

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

Environmental precautions: Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
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
Local/Total ventilation : Use only with adequate ventilation.
Advice on safe handling : Do not get on skin or clothing.
Avoid breathing mist or vapors.
Do not swallow.
Avoid contact with eyes.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment.
Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage : Keep in properly labeled containers.
Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:
Strong oxidizing agents
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>
</tr>
</thead>
<tbody>
<tr>
<td>Propylene glycol</td>
<td>57-55-6</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>US WEEL</td>
</tr>
<tr>
<td>Deltamethrin (ISO)</td>
<td>52918-63-5</td>
<td>TWA</td>
<td>15 µg/m³ (OEB 3)</td>
<td>Internal</td>
</tr>
</tbody>
</table>

Further information: DSEN, Skin
Wipe limit: 100 µg/100 cm² Internal

Engineering measures : Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less 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 : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn.
Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide...
# SAFETY DATA SHEET
according to the OSHA Hazard Communication Standard

## Deltamethrin Pour-On Formulation

**Version** 4.1  
**Revision Date:** 11/03/2023  
**SDS Number:** 657095-00021  
**Date of last issue:** 10/20/2023  
**Date of first issue:** 05/02/2016

### Hand protection

<table>
<thead>
<tr>
<th>Material</th>
<th>Chemical-resistant gloves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remarks</td>
<td>Consider double gloving.</td>
</tr>
</tbody>
</table>

### Eye protection

| Remarks                                                                 | 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

| Material | Work uniform or laboratory coat.  
|----------|-----------------------------------------------------------------------------------|
| Remarks  | 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

| Remarks                                                                 | 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.  
| Contaminated work clothing should not be allowed out of the workplace.  
| 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**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Aqueous solution, suspension</td>
</tr>
<tr>
<td>Color</td>
<td>white</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
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)
   Water solubility: completely miscible
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
Not classified based on available information.

Product:
Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 112.14 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Components:

Propylene glycol:
Acute oral toxicity : LD50 (Rat): 22,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 44.9 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

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
Skin corrosion/irritation
Not classified based on available information.

Components:

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

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

Serious eye damage/eye irritation
Not classified based on available information.

Components:

Propylene glycol:
Species : Rabbit
Result : No eye irritation
Method : OECD Test Guideline 405

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:

Propylene glycol:
Test Type : Maximization Test
Routes of exposure : Skin contact
Species : Guinea pig
Result : negative

Deltamethrin (ISO):
Test Type : Maximization Test
Routes of exposure : Dermal
Species : Guinea pig
Result : negative
## Deltamethrin Pour-On Formulation

<table>
<thead>
<tr>
<th>Version</th>
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<th>Date of last issue: 10/20/2023</th>
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<tr>
<td>4.1</td>
<td>11/03/2023</td>
<td>657095-00021</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Test Type
- Human repeat insult patch test (HRIPT)
- Dermal
- Humans
- positive

### Germ cell mutagenicity
Not classified based on available information.

### Components:

**Propylene glycol:**
- Genotoxicity in vitro:
  - Test Type: Bacterial reverse mutation assay (AMES)
    - Result: negative
  - Test Type: Chromosome aberration test in vitro
    - Method: OECD Test Guideline 473
    - Result: negative
- Genotoxicity in vivo:
  - Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
    - Species: Mouse
    - Application Route: Intraperitoneal injection
    - Result: negative

**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:

Propylene glycol:
Species: Rat  
Application Route: Ingestion  
Exposure time: 2 Years  
Result: negative

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

IARC  No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA  No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.

NTP  No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity
Suspected of damaging fertility. Suspected of damaging the unborn child.

Components:

Propylene glycol:
Effects on fertility: Test Type: Two-generation reproduction toxicity study  
Species: Mouse
## Deltamethrin Pour-On Formulation

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<tr>
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<tr>
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<td>657095-00021</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Application Route: Ingestion

**Result:** negative

**Effects on fetal development**

- **Test Type:** Embryo-fetal development
- **Species:** Mouse
- **Application Route:** Ingestion
- **Result:** negative

### 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.
Deltamethrin Pour-On Formulation

STOT-single exposure
Not classified based on available information.

Components:

Deltamethrin (ISO):
Assessment: May cause respiratory irritation.

STOT-repeated exposure
Not classified based on available information.

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:

Propylene glycol:
Species: Rat, male
NOAEL: >= 1,700 mg/kg
Application Route: Ingestion
Exposure time: 2 y

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)
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
Deltamethrin Pour-On Formulation

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
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:

Propylene glycol:
Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (water flea)): 18,340 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants : ErC50 (Skeletonema costatum (marine diatom)): 19,300 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Ceriodaphnia dubia (water flea)): 13,020 mg/l Exposure time: 7 d
Toxicity to microorganisms: NOEC (Pseudomonas putida): > 20,000 mg/l
Exposure time: 18 h

Deltamethrin (ISO):

<table>
<thead>
<tr>
<th>Toxinity to fish</th>
<th>LC50 (Cyprinodon variegatus (sheepshead minnow)): 0.00048 mg/l</th>
<th>Exposure time: 96 h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LC50 (Oncorhynchus mykiss (rainbow trout)): 0.00039 mg/l</td>
<td>Exposure time: 96 h</td>
</tr>
</tbody>
</table>

Toxicity to daphnia and other aquatic invertebrates:

<table>
<thead>
<tr>
<th>Toxinity to daphnia and other aquatic invertebrates: EC50 (Mysidopsis bahia (opossum shrimp)): 0.0037 µg/l</th>
<th>Exposure time: 48 h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EC50 (Daphnia magna (Water flea)): 0.0035 mg/l</td>
</tr>
<tr>
<td></td>
<td>LC50 (Gammarus fasciatus (freshwater shrimp)): 0.0003 µg/l</td>
</tr>
</tbody>
</table>

Toxicity to algae/aquatic plants:

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

Toxicity to fish (Chronic toxicity):

<table>
<thead>
<tr>
<th>Toxinity to fish (Chronic toxicity): NOEC (Pimephales promelas (fathead minnow)): 0.000022 mg/l</th>
<th>Exposure time: 36 d</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOEC (Pimephales promelas (fathead minnow)): 0.000017 mg/l</td>
<td>Exposure time: 260 d</td>
</tr>
</tbody>
</table>

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

| Toxinity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Daphnia magna (Water flea)): 0.0041 µg/l | Exposure time: 21 d |

Persistence and degradability

Components:

Propylene glycol:

<table>
<thead>
<tr>
<th>Biodegradability</th>
<th>Result: Readily biodegradable. Biodegradation: 98.3 %</th>
<th>Exposure time: 28 d</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Method: OECD Test Guideline 301F</td>
<td></td>
</tr>
</tbody>
</table>

Deltamethrin (ISO):

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

Components:

**Propylene glycol:**
Partition coefficient: n-octanol/water : log Pow: -1.07

**Deltamethrin (ISO):**
Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 1,800
Partition coefficient: n-octanol/water : log Pow: 4.6

Mobility in soil

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.
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. (deltamethrin (ISO))

Class : 9
Packing group : III
Labels : 9
Environmentally hazardous : yes

IATA-DGR
UN/ID No. : UN 3082
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s. (Deltamethrin (ISO))

Class : 9
Deltamethrin Pour-On Formulation

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))

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

49 CFR
UN/ID/NA number: UN 3082
Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (Deltamethrin (ISO))
Class: 9
Packing group: III
Labels: CLASS 9
ERG Code: 171
Marine pollutant: yes (Deltamethrin (ISO))
Remarks: Above applies only to containers over 119 gallons or 450 liters.
Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

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

CERCLA Reportable Quantity
Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 304 Extremely Hazardous Substances Reportable Quantity
Listed substances in the product are at low enough levels to not be expected to exceed the RQ

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity
This material does not contain any components with a section 302 EHS TPQ.
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SARA 311/312 Hazards:
Respiratory or skin sensitization
Reproductive toxicity

SARA 313:
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations
Pennsylvania Right To Know
Water 7732-18-5
Propylene glycol 57-55-6
Formaldehyde 50-00-0

California Prop. 65
WARNING: This product can expose you to chemicals including Formaldehyde, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

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
NFPA 704:
HMIS® IV:

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations
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US WEEL | USA. Workplace Environmental Exposure Levels (WEEL) |
US WEEL / TWA | 8-hr TWA |

AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; HMIS - Hazardous Materials Identification System; 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; IECS - 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; KECC - 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RO - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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


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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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