SAFETY DATA SHEET

Deltamethrin (1%) Formulation

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Deltamethrin (1%) Formulation

Manufacturer or supplier’s details

Company : MSD
Address : Briahnager - Off Pune Nagar Road
           Wagholi - Pune - India 412 207
Telephone : +1-908-740-4000
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

Manufacture, Storage and Import of Hazardous Chemicals Rules 1989

Classification
Not classified as hazardous according to criteria laid down in Part I of Schedule-1.

GHS Classification
Skin corrosion/irritation : Category 3
Serious eye damage/eye irri-
tation : Category 2A
Skin sensitisation : Category 1
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

GHS label elements
2. HAZARD IDENTIFICATION

Hazard pictograms: [Image of pictograms]
Signal word: Warning
Hazard statements:
- H316 Causes mild skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- 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:
  - P260 Do not breathe mist or vapours.
  - P264 Wash skin thoroughly after handling.
  - P272 Contaminated work clothing should not be allowed out of the workplace.
  - P273 Avoid release to the environment.
  - P280 Wear protective gloves/ eye protection/ face protection.
- Response:
  - 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.
  - P319 Get medical help if you feel unwell.
  - P333 + P317 If skin irritation or rash occurs: Get medical help.
  - P337 + P317 If eye irritation persists: Get medical help.
  - P362 + P364 Take off contaminated clothing and wash it before reuse.
  - P391 Collect spillage.
- Disposal:
  - P501 Dispose of contents/ container to an approved waste disposal plant.

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>Cyclohexanone</td>
<td>108-94-1</td>
<td>&gt;= 1 - &lt; 3</td>
</tr>
<tr>
<td>Deltamethrin (ISO)</td>
<td>52918-63-5</td>
<td>&gt;= 1 - &lt; 2.5</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES
SAFETY DATA SHEET

Deltamethrin (1%) Formulation

Version 1.1 Revision Date: 27.08.2021 SDS Number: 6328810-00002 Date of last issue: 11.09.2020
Date of first issue: 11.09.2020

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.
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.

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 : Causes mild skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause damage to organs through prolonged or repeated exposure if swallowed.
May cause damage to organs through prolonged or repeated exposure if inhaled.

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)
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 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).

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:
If sufficient ventilation is unavailable, use with local exhaust 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 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>
</table>
Deltamethrin (1%) Formulation

Biological occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyclohexanone</td>
<td>108-94-1</td>
<td>1,2-Cyclohexanediol</td>
<td>Urine</td>
<td>End of shift at end of work-week</td>
<td>80 mg/l</td>
<td>ACGIH BEI</td>
</tr>
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<td></td>
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</tr>
<tr>
<td>deltamethrin (ISO)</td>
<td>52918-63-5</td>
<td>TWA</td>
<td></td>
<td>15 µg/m3 (OEB 3) Internal</td>
<td></td>
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</tbody>
</table>

Further information: DSEN, Skin

Wipe limit 150 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

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.
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.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>yellow</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour 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>
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<tr>
<td>Evaporation rate</td>
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<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
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<tr>
<td>Flammability (liquids)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit / Upper flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit / Lower flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
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<tr>
<td>Relative vapour density</td>
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</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>0.85 - 0.95 g/cm³</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td></td>
</tr>
</tbody>
</table>
Deltamethrin (1%) Formulation

Water solubility : No data available
Partition coefficient: n-octanol/water : Not applicable
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 : No data available
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
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: > 40 mg/l
  Exposure time: 4 h
  Test atmosphere: vapour
  Method: Calculation method
Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg
  Method: Calculation method
## Components:

### Cyclohexanone:
- **Acute oral toxicity**: LD50 (Rat): 1,620 mg/kg
- **Acute inhalation toxicity**: Acute toxicity estimate: 11 mg/l  
  Exposure time: 4 h  
  Test atmosphere: vapour  
  Method: Expert judgement
- **Acute dermal toxicity**: LD50 (Rabbit): > 1,000 - 2,000 mg/kg

### 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
Causes mild skin irritation.

## Components:

### Cyclohexanone:
- **Species**: Rabbit  
- **Method**: OECD Test Guideline 404  
- **Result**: Skin irritation

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

### Serious eye damage/eye irritation
Causes serious eye irritation.
Species : Rabbit
Result : Irreversible effects on the eye

deltamethrin (ISO):
Species : Rabbit
Result : Moderate eye irritation

Respiratory or skin sensitisation

Skin sensitisation
May cause an allergic skin reaction.

Respiratory sensitisation
Not classified based on available information.

Components:

Cyclohexanone:
Test Type : Maximisation Test
Exposure routes : Skin contact
Species : Guinea pig
Result : negative

deltamethrin (ISO):
Test Type : Maximisation Test
Exposure routes : Dermal
Species : Guinea pig
Result : negative

Test Type : Human repeat insult patch test (HRIPT)
Exposure routes : Dermal
Species : Humans
Result : positive

Germ cell mutagenicity
Not classified based on available information.

Components:

Cyclohexanone:
Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : Test Type: Rodent dominant lethal test (germ cell) (in vivo)
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:

Cyclohexanone:
- Species: Mouse
- Application Route: Ingestion
- Exposure time: 104 weeks
- Result: negative

deltamethrin (ISO):
- Species: Mouse, male and female
- Application Route: oral (feed)
- Exposure time: 104 weeks
- NOAEL: 8 mg/kg body weight
Deltamethrin (1%) Formulation

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
Not classified based on available information.

Components:

Cyclohexanone:
Effects on fertility: Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapour)
Result: negative

Effects on foetal development: Test Type: Embryo-foetal development
Species: Rabbit
Application Route: Ingestion
Method: OECD Test Guideline 414
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-foetal 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-foetal 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 foetal 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 foetal development

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

- **Exposure routes:** Ingestion
- **Target Organs:** Central nervous system, Immune system
- **Assessment:** Causes damage to organs through prolonged or repeated exposure.

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

**Repeated dose toxicity**

**Components:**

**Cyclohexanone:**
Species : Rat
NOAEL : 143 mg/kg
Application Route : Ingestion
Exposure time : 90 Days
Method : OECD Test Guideline 408

**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
Exposure time : 13 Weeks
Target Organs : Nervous system
Symptoms : Dilatation of the pupil, Vomiting, Tremors, Diarrhoea, 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.

**Components:**

**Cyclohexanone:**
The substance or mixture causes concern owing to the assumption that it causes a human aspiration toxicity hazard.
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

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Cyclohexanone:
Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): 527 - 732 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 800 mg/l
Exposure time: 24 h

Toxicity to algae/aquatic plants: EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

NOEC (Desmodesmus subspicatus (green algae)): > 1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to microorganisms: EC50: > 1,000 mg/l
Exposure time: 30 min
Method: OECD Test Guideline 209

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

LC50 (Gammarus fasciatus (freshwater shrimp)): 0.0003 µg/l
Exposure time: 96 h

Toxicity to algae/aquatic plants:
EC50 (Pseudokirchneriella subcapitata (green algae)): > 9.1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: No toxicity at the limit of solubility

M-Factor (Acute aquatic toxicity): 1,000,000

Toxicity to fish (Chronic toxicity):
NOEC: 0.000022 mg/l
Exposure time: 36 d
Species: Pimephales promelas (fathead minnow)

NOEC: 0.00017 mg/l
Exposure time: 260 d
Species: Pimephales promelas (fathead minnow)

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

M-Factor (Chronic aquatic toxicity): 1,000,000

Persistence and degradability

Components:

Cyclohexanone:
Biodegradability: Result: Readily biodegradable.
Biodegradation: 90 - 100 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Biotransformation:
Bioaccumulative potential

Components:

Cyclohexanone:
Partition coefficient: n-octanol/water: log Pow: 0.86

deltamethrin (ISO):
Stability in water: Hydrolysis: 0 % (30 d)

Bioaccumulation:
Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 1,800
SAFETY DATA SHEET

Deltamethrin (1%) Formulation

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

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. (deltamethrin (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. (deltamethrin (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. (deltamethrin (ISO))
SAFETY DATA SHEET

Deltamethrin (1%) Formulation

Class: 9
Packing group: III
Labels: 9
EmS Code: F-A, S-F
Marine pollutant: yes

Transport in bulk according to IMO instruments
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

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
Date format: dd.mm.yyyy

Full text of other abbreviations
ACGIH: USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI: ACGIH - Biological Exposure Indices (BEI)
ACGIH / TWA: 8-hour, time-weighted average
ACGIH / STEL: Short-term exposure limit

AIIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory con-
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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