SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Deltamethrin (3%) Formulation

Version 1.1  Revision Date: 12.10.2021  SDS Number: 7731634-00002  Date of last issue: 13.01.2021
Date of first issue: 13.01.2021

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
Trade name: Deltamethrin (3%) Formulation

1.2 Relevant identified uses of the substance or mixture and uses advised against
Use of the Substance/Mixture: Veterinary product

1.3 Details of the supplier of the safety data sheet
Company: MSD
Kilsheelan
Clonmel Tipperary, IE
Telephone: 353-51-601000
E-mail address of person responsible for the SDS: EHSDATASTEWARD@msd.com

1.4 Emergency telephone number
1-908-423-6000

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)
Flammable liquids, Category 3
Acute toxicity, Category 4
Acute toxicity, Category 4
Acute toxicity, Category 4
Skin irritation, Category 2
Serious eye damage, Category 1
Skin sensitisation, Category 1
Reproductive toxicity, Category 2
Specific target organ toxicity - single exposure, Category 3
Specific target organ toxicity - repeated exposure, Category 2
Aspiration hazard, Category 1
Short-term (acute) aquatic hazard, Category 1
Long-term (chronic) aquatic hazard, Category 1

H226: Flammable liquid and vapour.
H302: Harmful if swallowed.
H332: Harmful if inhaled.
H312: Harmful in contact with skin.
H315: Causes skin irritation.
H318: Causes serious eye damage.
H317: May cause an allergic skin reaction.
H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.
H335: May cause respiratory irritation.
H373: May cause damage to organs through prolonged or repeated exposure.
H304: May be fatal if swallowed and enters airways.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)
Deltamethrin (3%) Formulation

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date:</th>
<th>SDS Number:</th>
<th>Date of last issue:</th>
<th>Date of first issue:</th>
</tr>
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<tbody>
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<td>1.1</td>
<td>12.10.2021</td>
<td>7731634-00002</td>
<td>13.01.2021</td>
<td>13.01.2021</td>
</tr>
</tbody>
</table>

Hazard pictograms: ![Pictograms]

Signal word: Danger

Hazard statements:
- H226 Flammable liquid and vapour.
- H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled.
- H304 May be fatal if swallowed and enters airways.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H335 May cause respiratory irritation.
- H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

**Prevention:**
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**
- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
- 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.
- P391 Collect spillage.

Hazardous components which must be listed on the label:
- Xylene
- Calcium dodecylbenzenesulphonate
- Nonylphenol, ethoxylated
deltamethrin (ISO)

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: This substance/mixture contains components considered to have endocrine disrupting properties for environment, according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.
Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Vapours may form explosive mixture with air.

SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Registration number</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
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</thead>
<tbody>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>215-535-7</td>
<td>601-022-00-9</td>
<td></td>
<td>Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 STOT RE 2; H373 (Auditory system) Asp. Tox. 1; H304 Aquatic Chronic 3; H412</td>
<td>&gt;= 70 - &lt; 90</td>
</tr>
<tr>
<td></td>
<td>26264-06-2</td>
<td>247-557-8</td>
<td></td>
<td></td>
<td>Acute toxicity estimate</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acute inhalation toxicity (vapour): 11 mg/l</td>
<td></td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td>Acute dermal toxicity: 1,100 mg/kg</td>
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<tr>
<td>Calcium dodecylbenzenesulphonate</td>
<td>26264-06-2</td>
<td>247-557-8</td>
<td></td>
<td></td>
<td>Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Aquatic Chronic 3; H412</td>
<td>&gt;= 3 - &lt; 10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acute toxicity estimate</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acute oral toxicity: 500.05 mg/kg</td>
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<tr>
<td>Nonylphenol, ethoxylated</td>
<td>9016-45-9</td>
<td></td>
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<td>Acute Tox. 4; H302 Eye Dam. 1; H318 Aquatic Chronic 2; H411</td>
<td>&gt;= 3 - &lt; 10</td>
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<tr>
<td></td>
<td>52918-63-5</td>
<td>258-256-6</td>
<td>607-319-00-X</td>
<td></td>
<td>Acute Tox. 3; H301 Acute Tox. 3; H331 Eye Irrit. 2; H319 Skin Sens. 1A; H317</td>
<td>&gt;= 3 - &lt; 10</td>
</tr>
</tbody>
</table>
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Repr. 2; H361fd
STOT SE 3; H335
STOT RE 1; H372
(Central nervous system, Immune system)
STOT RE 1; H372
(Central nervous system)
Aquatic Acute 1;
H400
Aquatic Chronic 1;
H410

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

2,6-Di-tert-butyl-p-cresol
128-37-0
204-881-4
Aquatic Acute 1;
H400
Aquatic Chronic 1;
H410

M-Factor (Acute aquatic toxicity): 1
M-Factor (Chronic aquatic toxicity): 1

>= 1 - < 2.5

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of 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.

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).

If inhaled
If inhaled, remove to fresh air. Get medical attention.

In case of skin contact
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

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

If swallowed:
- If swallowed, DO NOT induce vomiting.
- If vomiting occurs have person lean forward.
- Call a physician or poison control centre immediately.
- Rinse mouth thoroughly with water.
- Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Risks:
- Harmful if swallowed, in contact with skin or if inhaled.
- May be fatal if swallowed and enters airways.
- Causes skin irritation.
- May cause an allergic skin reaction.
- Causes serious eye damage.
- May cause respiratory irritation.
- Suspected of damaging fertility. Suspected of damaging the unborn child.
- May cause damage to organs through prolonged or repeated exposure.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment:
- Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Extinguishing media

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

Unsuitable extinguishing media:
- High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting:
- Do not use a solid water stream as it may scatter and spread fire.
- Flash back possible over considerable distance.
- Vapours may form explosive mixtures with air.
- Exposure to combustion products may be a hazard to health.

Hazardous combustion products:
- Carbon oxides
- Nitrogen oxides (NOx)
- Bromine compounds
5.3 Advice for firefighters

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

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

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Remove all sources of ignition. Use personal protective equipment. Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

6.2 Environmental precautions

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.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up: Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapours/mists with a water spray jet. 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.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.
SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation. Use explosion-proof electrical, ventilating and lighting equipment.

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. Non-sparking tools should be used. Keep container tightly closed. Already sensitised individuals should consult their physician regarding working with respiratory irritants or sensitisers. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Do not eat, drink or smoke when using this product. 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. 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.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep in properly labelled containers. Store locked up. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition.

Advice on common storage : Do not store with the following product types: Strong oxidizing agents Organic peroxides Flammable solids Pyrophoric liquids Pyrophoric solids Self-heating substances and mixtures Substances and mixtures, which in contact with water, emit flammable gases.
EXPLOSIVES
GASES

7.3 Specific end use(s)
Specific use(s): No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>OELV - 8 hrs (TWA)</td>
<td>50 ppm 221 mg/m³</td>
<td>IE OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>OELV - 15 min (STEL)</td>
<td>100 ppm 442 mg/m³</td>
<td>IE OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>50 ppm 221 mg/m³</td>
<td>2000/39/EC</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>100 ppm 442 mg/m³</td>
<td>2000/39/EC</td>
</tr>
<tr>
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</tr>
<tr>
<td>deltamethrin (ISO)</td>
<td>52918-63-5</td>
<td>TWA</td>
<td>15 µg/m³ (OEB 3)</td>
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<td></td>
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<td>Wipe limit</td>
<td>150 µg/100 cm²</td>
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<td>2,6-Di-tert-butyl-p-cresol</td>
<td>128-37-0</td>
<td>OELV - 8 hrs (TWA)</td>
<td>2 mg/m³</td>
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Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

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<th>Substance name</th>
<th>End Use</th>
<th>Exposure routes</th>
<th>Potential health effects</th>
<th>Value</th>
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<tr>
<td>Xylene</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>221 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>Acute systemic effects</td>
<td>442 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term local effects</td>
<td>221 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>Acute local effects</td>
<td>442 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>212 mg/kg bw/day</td>
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<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>65.3 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>Acute systemic effects</td>
<td>260 mg/m³</td>
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</table>
### Deltamethrin (3%) Formulation

<table>
<thead>
<tr>
<th></th>
<th>Exposure Route</th>
<th>Endpoints</th>
<th>Concentration</th>
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<tbody>
<tr>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term local effects</td>
<td>65.3 mg/m³</td>
</tr>
<tr>
<td>Consumers</td>
<td>Inhalation</td>
<td>Acute local effects</td>
<td>260 mg/m³</td>
</tr>
<tr>
<td>Consumers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>125 mg/kg bw/day</td>
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<td>Consumers</td>
<td>Ingestion</td>
<td>Long-term systemic effects</td>
<td>12.5 mg/kg bw/day</td>
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<tr>
<td>2,6-Di-tert-butyl-p-cresol</td>
<td>Workers Inhalation</td>
<td>Long-term systemic effects</td>
<td>3.5 mg/m³</td>
</tr>
<tr>
<td>Workers</td>
<td>Dermal</td>
<td>Long-term systemic effects</td>
<td>0.5 mg/kg bw/day</td>
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<tr>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>0.86 mg/m³</td>
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<tr>
<td>Consumers</td>
<td>Dermal</td>
<td>Long-term systemic effects</td>
<td>0.25 mg/kg bw/day</td>
</tr>
<tr>
<td>Consumers</td>
<td>Ingestion</td>
<td>Long-term systemic effects</td>
<td>0.25 mg/kg bw/day</td>
</tr>
<tr>
<td>Calcium dodecylbenzenesulphonate</td>
<td>Workers Inhalation</td>
<td>Long-term systemic effects</td>
<td>52 mg/m³</td>
</tr>
<tr>
<td>Workers</td>
<td>Inhalation</td>
<td>Acute systemic effects</td>
<td>52 mg/m³</td>
</tr>
<tr>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term local effects</td>
<td>52 mg/m³</td>
</tr>
<tr>
<td>Workers</td>
<td>Ingestion</td>
<td>Acute local effects</td>
<td>52 mg/m³</td>
</tr>
<tr>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>57.2 mg/kg bw/day</td>
</tr>
<tr>
<td>Workers</td>
<td>Skin contact</td>
<td>Acute systemic effects</td>
<td>80 mg/kg bw/day</td>
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<tr>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term local effects</td>
<td>1.57 mg/kg bw/day</td>
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<tr>
<td>Workers</td>
<td>Skin contact</td>
<td>Acute local effects</td>
<td>1.57 mg/kg bw/day</td>
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<tr>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>26 mg/m³</td>
</tr>
<tr>
<td>Consumers</td>
<td>Inhalation</td>
<td>Acute systemic effects</td>
<td>26 mg/m³</td>
</tr>
<tr>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term local effects</td>
<td>26 mg/m³</td>
</tr>
<tr>
<td>Consumers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>28.6 mg/kg bw/day</td>
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<tr>
<td>Consumers</td>
<td>Skin contact</td>
<td>Acute systemic effects</td>
<td>40 mg/kg bw/day</td>
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<tr>
<td>Consumers</td>
<td>Skin contact</td>
<td>Acute local effects</td>
<td>0.787 mg/kg bw/day</td>
</tr>
<tr>
<td>Consumers</td>
<td>Skin contact</td>
<td>Long-term local effects</td>
<td>0.787 mg/kg bw/day</td>
</tr>
<tr>
<td>Consumers</td>
<td>Ingestion</td>
<td>Long-term systemic effects</td>
<td>13 mg/kg bw/day</td>
</tr>
<tr>
<td>Consumers</td>
<td>Ingestion</td>
<td>Acute systemic effects</td>
<td>13 mg/kg bw/day</td>
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</tbody>
</table>
Deltamethrin (3%) Formulation

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Environmental Compartment</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Xylene</td>
<td>Fresh water</td>
<td>0.327 mg/l</td>
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<tr>
<td></td>
<td>Intermittent use/release</td>
<td>0.327 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.327 mg/l</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>6.58 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>12.46 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>12.46 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>2.31 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td>2,6-Di-tert-butyl-p-cresol</td>
<td>Fresh water</td>
<td>0.199 µg/l</td>
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<tr>
<td></td>
<td>Intermittent use/release</td>
<td>0.02 µg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.02 µg/l</td>
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<td></td>
<td>Sewage treatment plant</td>
<td>0.17 mg/l</td>
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<td></td>
<td>Fresh water sediment</td>
<td>0.0996 mg/kg dry weight (d.w.)</td>
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<tr>
<td></td>
<td>Marine sediment</td>
<td>0.00996 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>0.04769 mg/kg dry weight (d.w.)</td>
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<tr>
<td>Calcium dodecylbenzenesulphonate</td>
<td>Fresh water</td>
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<td>Freshwater - intermittent</td>
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<td>Marine water</td>
<td>0.458 mg/l</td>
</tr>
<tr>
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<td>Sewage treatment plant</td>
<td>50 mg/l</td>
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<td>Fresh water sediment</td>
<td>27.5 mg/kg dry weight (d.w.)</td>
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<tr>
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<td>Marine sediment</td>
<td>2.75 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td></td>
<td>Air</td>
<td>10 mg/m3</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>25 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td></td>
<td>Oral</td>
<td>8.33 mg/kg food</td>
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</table>

8.2 Exposure controls

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.
Use explosion-proof electrical, ventilating and lighting equipment.

Personal protective equipment
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 face shield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

**Hand protection**

- **Material**: Chemical-resistant gloves
- **Remarks**: Consider double gloving. Take note that the product is flammable, which may impact the selection of hand protection.

**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.

**Respiratory protection**

- If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.
- **Equipment should conform to I.S. EN 14387**
- **Filter type**: Combined particulates and organic vapour type (A-P)

### SECTION 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties**

- **Physical state**: liquid
- **Colour**: yellow
- **Odour**: No data available
- **Odour Threshold**: No data available
- **Melting point/freezing point**: No data available
- **Initial boiling point and boiling range**: 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
- **Flash point**: 45 - 51 °C
- **Auto-ignition temperature**: No data available
- **Decomposition temperature**: No data available
- **pH**: 4 - 5
- **Viscosity**
Deltamethrin (3%) Formulation

<table>
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<th>Viscosity, kinematic</th>
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<tr>
<td>Water solubility</td>
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<td>Partition coefficient: n-octanol/water</td>
<td>Not applicable</td>
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<tr>
<td>Vapour pressure</td>
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<td>Relative density</td>
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<tr>
<td>Density</td>
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<tr>
<td>Relative vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Particle characteristics</td>
<td></td>
</tr>
<tr>
<td>Particle size</td>
<td>Not applicable</td>
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</tbody>
</table>

9.2 Other information

Explosives: Not explosive
Oxidizing properties: The substance or mixture is not classified as oxidizing.
Evaporation rate: No data available
Molecular weight: No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
Not classified as a reactivity hazard.

10.2 Chemical stability
Stable under normal conditions.

10.3 Possibility of hazardous reactions
Hazardous reactions: Flammable liquid and vapour.
Vapours may form explosive mixture with air.
Can react with strong oxidizing agents.

10.4 Conditions to avoid
Conditions to avoid: Heat, flames and sparks.

10.5 Incompatible materials
Materials to avoid: Oxidizing agents

10.6 Hazardous decomposition products
No hazardous decomposition products are known.
SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

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

Acute toxicity
Harmful if swallowed, in contact with skin or if inhaled.

Product:
- Acute oral toxicity: Acute toxicity estimate: 1,291 mg/kg
  Method: Calculation method
- Acute inhalation toxicity: Acute toxicity estimate: 11.73 mg/l
  Exposure time: 4 h
  Test atmosphere: vapour
  Method: Calculation method
- Acute dermal toxicity: Acute toxicity estimate: 1,347 mg/kg
  Method: Calculation method

Components:

Xylene:
- Acute oral toxicity: LD50 (Rat): 3,523 mg/kg
- Acute inhalation toxicity: Acute toxicity estimate: 11 mg/l
  Exposure time: 4 h
  Test atmosphere: vapour
  Method: Expert judgement
  Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI
- Acute dermal toxicity: Acute toxicity estimate: 1,100 mg/kg
  Method: Expert judgement
  Remarks: Based on harmonised classification in EU regulation 1272/2008, Annex VI

Calcium dodecylbenzenesulphonate:
- Acute oral toxicity: LD50 (Rat): > 500 - 2,000 mg/kg
  Method: OECD Test Guideline 401
  Remarks: Based on data from similar materials

Acute toxicity estimate: 500.05 mg/kg
  Method: Calculation method

- Acute dermal toxicity: LD50 (Rabbit): > 2,000 mg/kg
  Method: OECD Test Guideline 402
  Remarks: Based on data from similar materials
## Deltamethrin (3%) Formulation

<table>
<thead>
<tr>
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<th>Revision Date:</th>
<th>SDS Number:</th>
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<td>1.1</td>
<td>12.10.2021</td>
<td>7731634-00002</td>
<td>13.01.2021</td>
<td>13.01.2021</td>
</tr>
</tbody>
</table>

### Nonylphenol, ethoxylated:

- **Acute oral toxicity**: LD50 (Rat): 500 - 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

### 2,6-Di-tert-butyl-p-cresol:

- **Acute oral toxicity**: LD50 (Rat): > 6,000 mg/kg
  - Method: OECD Test Guideline 401
- **Acute dermal toxicity**: LD50 (Rat): > 2,000 mg/kg
  - Method: OECD Test Guideline 402
  - Assessment: The substance or mixture has no acute dermal toxicity

### Skin corrosion/irritation:

Causes skin irritation.

### Components:

#### Xylene:

- **Species**: Rabbit
- **Result**: Skin irritation

#### Calcium dodecylbenzenesulphonate:

- **Species**: Rabbit
- **Method**: OECD Test Guideline 404
- **Result**: Skin irritation
- **Remarks**: Based on data from similar materials

#### Nonylphenol, ethoxylated:
Deltamethrin (3%) Formulation

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

deltamethrin (ISO):
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

2,6-Di-tert-butyl-p-cresol:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation
Remarks: Based on data from similar materials

Serious eye damage/eye irritation
Causes serious eye damage.

Components:

Xylene:
Species: Rabbit
Result: Irritation to eyes, reversing within 21 days

Calcium dodecylbenzenesulphonate:
Species: Rabbit
Method: OECD Test Guideline 405
Result: Irreversible effects on the eye
Remarks: Based on data from similar materials

Nonylphenol, ethoxylated:
Species: Rabbit
Method: OECD Test Guideline 405
Result: Irreversible effects on the eye

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

2,6-Di-tert-butyl-p-cresol:
Species: Rabbit
Method: OECD Test Guideline 405
Result: No eye irritation
Remarks: Based on data from similar materials

Respiratory or skin sensitisation

Skin sensitisation
May cause an allergic skin reaction.
Respiratory sensitisation
Not classified based on available information.

**Components:**

**Xylene:**
- **Test Type:** Local lymph node assay (LLNA)
- **Exposure routes:** Skin contact
- **Species:** Mouse
- **Result:** negative

**Calcium dodecylbenzenesulphonate:**
- **Test Type:** Maximisation Test
- **Exposure routes:** Skin contact
- **Species:** Guinea pig
- **Method:** OECD Test Guideline 406
- **Result:** negative
- **Remarks:** Based on data from similar materials

**Nonylphenol, ethoxylated:**
- **Test Type:** Maximisation Test
- **Exposure routes:** Skin contact
- **Species:** Guinea pig
- **Result:** negative
- **Remarks:** Based on data from similar materials

**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

**2,6-Di-tert-butyl-p-cresol:**
- **Test Type:** Human repeat insult patch test (HRIPT)
- **Exposure routes:** Skin contact
- **Species:** Humans
- **Result:** negative

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

**Components:**

**Xylene:**
- **Genotoxicity in vitro:** Test Type: Bacterial reverse mutation assay (AMES)
- **Result:** negative
<table>
<thead>
<tr>
<th><strong>Deltamethrin (3%) Formulation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Version</strong></td>
</tr>
<tr>
<td>1.1</td>
</tr>
</tbody>
</table>

- **Test Type:** Chromosome aberration test in vitro  
  **Result:** negative

- **Test Type:** In vitro mammalian cell gene mutation test  
  **Result:** negative

- **Test Type:** In vitro sister chromatid exchange assay in mammalian cells  
  **Result:** negative

**Genotoxicity in vivo**:
- **Test Type:** Rodent dominant lethal test (germ cell) (in vivo)  
  **Species:** Mouse  
  **Application Route:** Skin contact  
  **Result:** negative

**Calcium dodecylbenzenesulphonate**:
- **Genotoxicity in vitro**:
  - **Test Type:** Bacterial reverse mutation assay (AMES)  
    **Method:** OECD Test Guideline 471  
    **Result:** negative  
    **Remarks:** Based on data from similar materials
  - **Test Type:** In vitro mammalian cell gene mutation test  
    **Result:** negative  
    **Remarks:** Based on data from similar materials
  - **Test Type:** Chromosome aberration test in vitro  
    **Method:** OECD Test Guideline 473  
    **Result:** negative  
    **Remarks:** Based on data from similar materials

**Genotoxicity in vivo**:
- **Test Type:** Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
  **Species:** Mouse  
  **Application Route:** Ingestion  
  **Result:** negative  
  **Remarks:** Based on data from similar materials

**Nonylphenol, ethoxylated**:
- **Genotoxicity in vitro**:
  - **Test Type:** Bacterial reverse mutation assay (AMES)  
    **Result:** negative  
    **Remarks:** Based on data from similar materials

**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 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

2,6-Di-tert-butyl-p-cresol:
Genotoxicity in vitro  
Test Type: Bacterial reverse mutation assay (AMES)  
Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Result: negative

Test Type: Chromosome aberration test in vitro  
Result: negative

Genotoxicity in vivo  
Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)  
Species: Rat  
Application Route: Ingestion  
Result: negative

Carcinogenicity  
Not classified based on available information.

Components:

Xylene:
Species  :  Rat  
Application Route  :  Ingestion  
Exposure time  :  103 weeks  
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

2,6-Di-tert-butyl-p-cresol:
Species: Rat
Application Route: Ingestion
Exposure time: 22 Months
Result: negative

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

Components:

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

Effects on foetal development:
Species: Rat
Application Route: inhalation (vapour)
Result: negative

Calcium dodecylbenzenesulphonate:
Effects on fertility: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Effects on foetal development:
Species: Rat
Application Route: Ingestion
Result: negative
Deltamethrin (3%) Formulation

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.

2,6-Di-tert-butyl-p-cresol:

Effects on fertility:
- Test Type: Two-generation reproduction toxicity study
Species: Rat  
Application Route: Ingestion  
Result: negative

Effects on foetal development  
Species: Rat  
Application Route: Ingestion  
Result: negative

**STOT - single exposure**  
May cause respiratory irritation.

**Components:**

**Xylene:**
Assessment  
May cause respiratory irritation.

**deltamethrin (ISO):**
Assessment  
May cause respiratory irritation.

**STOT - repeated exposure**  
May cause damage to organs through prolonged or repeated exposure.

**Components:**

**Xylene:**
Exposure routes: inhalation (vapour)  
Target Organs: Auditory system  
Assessment: Shown to produce significant health effects in animals at concentrations of >0.2 to 1 mg/l/6h/d.

**Calcium dodecylbenzenesulphonate:**
Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

**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.

**2,6-Di-tert-butyl-p-cresol:**
Assessment: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.
Repeated dose toxicity

**Components:**

**Xylene:**
Species: Rat  
LOAEL: > 0.2 - 1 mg/l  
Application Route: inhalation (vapour)  
Exposure time: 13 Weeks  
Remarks: Based on data from similar materials

Species: Rat  
LOAEL: 150 mg/kg  
Application Route: Ingestion  
Exposure time: 90 Days

**Calcium dodecylbenzenesulphonate:**
Species: Rat  
LOAEL: > 200 mg/kg  
Application Route: Ingestion  
Exposure time: 6 - 7 Weeks  
Method: OECD Test Guideline 422  
Remarks: Based on data from similar materials

Species: Rabbit  
NOAEL: > 100 mg/kg  
Application Route: Skin contact  
Exposure time: 28 Days  
Method: OECD Test Guideline 410  
Remarks: Based on data from similar materials

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

Species: Mouse
NOAEL: 6 mg/kg
Application Route: Oral
Exposure time: 12 Weeks
Target Organs: Immune system
Symptoms: immune system effects

2,6-Di-tert-butyl-p-cresol:
Species: Rat
NOAEL: 25 mg/kg
Application Route: Ingestion
Exposure time: 22 Months

Aspiration toxicity
May be fatal if swallowed and enters airways.

Components:
Xylene:
The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

11.2 Information on other hazards
Endocrine disrupting properties
Product:
Assessment: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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,
Deltamethrin (3%) Formulation

SECTION 12: Ecological information

12.1 Toxicity

Components:

Xylene:
Toxicity to fish:
- LC50 (Oncorhynchus mykiss (rainbow trout)): 13.5 mg/l
  Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:
- EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l
  Exposure time: 24 h
  Method: OECD Test Guideline 202
  Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants:
- EC50 (Skeletonema costatum (marine diatom)): 10 mg/l
  Exposure time: 72 h

Toxicity to microorganisms:
- NOEC: > 100 mg/l
  Exposure time: 3 h
  Method: OECD Test Guideline 209
  Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity):
- NOEC: > 0.1 - < 1 mg/l
  Exposure time: 35 d
  Species: Danio rerio (zebra fish)
  Method: OECD Test Guideline 210
  Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
- EL10: > 1 - 10 mg/l
  Exposure time: 21 d
  Species: Daphnia magna (Water flea)
  Method: OECD Test Guideline 211
  Remarks: Based on data from similar materials

Calcium dodecylbenzenesulphonate:
Toxicity to fish:
- LC50 (Leuciscus idus (Golden orfe)): > 1 - 10 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)): > 1 - 10 mg/l
  Exposure time: 48 h
  Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants:
- ErC50 (Pseudokirchneriella subcapitata (green algae)): > 10 - 100 mg/l
  Exposure time: 72 h
  Remarks: Based on data from similar materials

  NOEC (Pseudokirchneriella subcapitata (green algae)): > 0.1 -
### Toxicity to Microorganisms

**EC50** (activated sludge): > 100 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209  
Remarks: Based on data from similar materials

### Toxicity to Fish (Chronic toxicity)

**NOEC**: > 0.1 - 1 mg/l  
Exposure time: 28 d  
Species: *Pimephales promelas* (fathead minnow)  
Remarks: Based on data from similar materials

### Toxicity to Daphnia and Other Aquatic Invertebrates (Chronic toxicity)

**NOEC**: > 1 mg/l  
Exposure time: 21 d  
Species: *Daphnia magna* (Water flea)  
Remarks: Based on data from similar materials

### Nonylphenol, Ethoxylated

**EC50** (*Daphnia sp.* (water flea)): 1.82 mg/l  
Exposure time: 48 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  
**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
SAFETY DATA SHEET
ger"e Regulation (EC) No. 1907/2006

Deltamethrin (3%) Formulation

Version: 1.1
Revision Date: 12.10.2021
SDS Number: 7731634-00002
Date of last issue: 13.01.2021
Date of first issue: 13.01.2021

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

Exposure time: 36 d
Species: Pimephales promelas (fathead minnow)

NOEC: 0.000017 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

2,6-Di-tert-butyl-p-cresol:

Toxicity to fish:
LC50 (Danio rerio (zebra fish)): > 0.57 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:
EC50 (Daphnia magna (Water flea)): 0.48 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants:
ErC50 (Pseudokirchneriella subcapitata (green algae)): > 0.24 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.24 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity): 1

Toxicity to microorganisms:
EC50: > 10,000 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity):
NOEC: 0.053 mg/l
Exposure time: 30 d
Species: Oryzias latipes (Japanese medaka)
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
NOEC: 0.316 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic toxicity): 1
12.2 Persistence and degradability

**Components:**

**Xylene:**
Biodegradability: Result: Readily biodegradable.
- Biodegradation: > 70 %
- Exposure time: 28 d
- Method: OECD Test Guideline 301F
- Remarks: Based on data from similar materials

**Calcium dodecylbenzenesulphonate:**
Biodegradability: Result: Readily biodegradable.
- Remarks: Based on data from similar materials

**Nonylphenol, ethoxylated:**
Biodegradability: Result: Readily biodegradable.
- Biodegradation: 97 %
- Exposure time: 30 d

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

**2,6-Di-tert-butyl-p-cresol:**
Biodegradability: Result: Not readily biodegradable.
- Biodegradation: 4.5 %
- Exposure time: 28 d
- Method: OECD Test Guideline 301C

12.3 Bioaccumulative potential

**Components:**

**Xylene:**
Partition coefficient: n-octanol/water: log Pow: 3.16
- Remarks: Calculation

**Calcium dodecylbenzenesulphonate:**
Bioaccumulation: Bioconcentration factor (BCF): < 500
- Remarks: Based on data from similar materials

**Nonylphenol, ethoxylated:**
Partition coefficient: n-octanol/water: log Pow: 4.77
- Remarks: Calculation

**Deltamethrin (ISO):**
Bioaccumulation: Species: Lepomis macrochirus (Bluegill sunfish)
Deltamethrin (3%) Formulation

Bioconcentration factor (BCF): 1,800

Partition coefficient: n-octanol/water : log Pow: 4.6

2,6-Di-tert-butyl-p-cresol:
Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 330 - 1,800

Partition coefficient: n-octanol/water : log Pow: 5.1

12.4 Mobility in soil

Components:

deltamethrin (ISO):
Distribution among environmental compartments : log Koc: 7.2

12.5 Results of PBT and vPvB assessment

Product:
Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components:

Nonylphenol, ethoxylated:
Assessment : This substance is considered to be persistent, bioaccumulating and toxic (PBT) and/or very persistent and very bioaccumulating (vPvB).

12.6 Endocrine disrupting properties

Product:
Assessment : This substance/mixture contains components considered to have endocrine disrupting properties for environment, according to REACH Article 57(f), Commission Regulation (EU) 2018/605 or Commission Delegated Regulation (EU) 2017/2100.

Components:

Nonylphenol, ethoxylated:
Assessment : The substance is considered to have endocrine disrupting properties according to REACH Article 57(f) for the environment.

12.7 Other adverse effects

No data available
SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product:
Dispose of in accordance with local regulations. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

Contaminated packaging:
Empty containers should be taken to an approved waste handling site for recycling or disposal. Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number or ID number

| ADN     | UN 1993 |
| ADR     | UN 1993 |
| RID     | UN 1993 |
| IMDG    | UN 1993 |
| IATA    | UN 1993 |

14.2 UN proper shipping name

| ADN     | FLAMMABLE LIQUID, N.O.S. (Xylene) |
| ADR     | FLAMMABLE LIQUID, N.O.S. (Xylene) |
| RID     | FLAMMABLE LIQUID, N.O.S. (Xylene) |
| IMDG    | FLAMMABLE LIQUID, N.O.S. (Xylene, deltamethrin (ISO), 2,6-Di-tert-butyl-p-cresol) |
| IATA    | Flammable liquid, n.o.s. (Xylene) |

14.3 Transport hazard class(es)

| ADN     | 3 |
| ADR     | 3 |
| RID     | 3 |
| IMDG    | 3 |
| IATA    | 3 |

14.4 Packing group
Deltamethrin (3%) Formulation

14.5 Environmental hazards

ADN
Environmentally hazardous : yes

ADR
Environmentally hazardous : yes

RID
Environmentally hazardous : yes

IMDG
Marine pollutant : yes

14.6 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

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII):

- Conditions of restriction for the following entries should be considered: Number on list 3 Nonylphenol, ethoxylated (Number on list 46b, 46a.)

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).
- Nonylphenol, ethoxylated

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:
- Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast):
- Not applicable

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals:
- Nonylphenol, ethoxylated

REACH - List of substances subject to authorisation (Annex XIV):
- Nonylphenol, ethoxylated


- Quantity 1: 100 t
- Quantity 2: 200 t

E1 ENVIRONMENTAL HAZARDS 5,000 t
P5c FLAMMABLE LIQUIDS 50,000 t

Other regulations:
Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.
Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

The components of this product are reported in the following inventories:

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

15.2 Chemical safety assessment
A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Other information:
- Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.
Deltamethrin (3%) Formulation

Full text of H-Statements

H226 : Flammable liquid and vapour.
H301 : Toxic if swallowed.
H302 : Harmful if swallowed.
H304 : May be fatal if swallowed and enters airways.
H312 : Harmful in contact with skin.
H315 : Causes skin irritation.
H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.
H319 : Causes serious eye irritation.
H331 : Toxic if inhaled.
H332 : Harmful if inhaled.
H335 : May cause respiratory irritation.
H361fd : Suspected of damaging fertility. Suspected of damaging the unborn child.
H372 : Causes damage to organs through prolonged or repeated exposure if inhaled.
H372 : Causes damage to organs through prolonged or repeated exposure if swallowed.
H373 : May cause damage to organs through prolonged or repeated exposure.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.
H411 : Toxic to aquatic life with long lasting effects.
H412 : Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Acute : Short-term (acute) aquatic hazard
Aquatic Chronic : Long-term (chronic) aquatic hazard
Asp. Tox. : Aspiration hazard
Eye Dam. : Serious eye damage
Eye Irrit. : Eye irritation
Flam. Liq. : Flammable liquids
Repr. : Reproductive toxicity
Skin Irrit. : Skin irritation
Skin Sens. : Skin sensitisation
STOT RE : Specific target organ toxicity - repeated exposure
STOT SE : Specific target organ toxicity - single exposure
IE OEL : Ireland. List of Chemical Agents and Occupational Exposure Limit Values - Schedule 1
2000/39/EC / TWA : Limit Value - eight hours
2000/39/EC / STEL : Short term exposure limit
IE OEL / OELV - 8 hrs (TWA) : Occupational exposure limit value (8-hour reference period)
IE OEL / OELV - 15 min (STEL) : Occupational exposure limit value (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -
Deltamethrin (3%) Formulation

Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; 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; 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 Standardization; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SDAT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

<table>
<thead>
<tr>
<th>Container</th>
<th>Description</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 3</td>
<td>H226</td>
<td>Based on product data or assessment</td>
</tr>
<tr>
<td>Acute Tox. 4</td>
<td>H302</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Acute Tox. 4</td>
<td>H332</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Acute Tox. 4</td>
<td>H312</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>H315</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Eye Dam. 1</td>
<td>H318</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Skin Sens. 1</td>
<td>H317</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Repr. 2</td>
<td>H361fd</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>H335</td>
<td>Calculation method</td>
</tr>
<tr>
<td>STOT RE 2</td>
<td>H373</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Asp. Tox. 1</td>
<td>H304</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Acute 1</td>
<td>H400</td>
<td>Calculation method</td>
</tr>
<tr>
<td>Aquatic Chronic 1</td>
<td>H410</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>
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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