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

1.1 Product identifier
   Trade name : Ivermectin (with Isopropyl Alcohol) 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)
   Eye irritation, Category 2 : H319: Causes serious eye irritation.
   Skin sensitisation, Category 1 : H317: May cause an allergic skin reaction.
   Specific target organ toxicity - single exposure, Category 3 : H336: May cause drowsiness or dizziness.
   Short-term (acute) aquatic hazard, Category 1 : H400: Very toxic to aquatic life.
   Long-term (chronic) aquatic hazard, Category 1 : H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

   Labelling (REGULATION (EC) No 1272/2008)
   Hazard pictograms : 
   Signal word : Warning
   Hazard statements : H226 Flammable liquid and vapour.
                      H317 May cause an allergic skin reaction.
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:
- P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
- P391 Collect spillage.

Hazardous components which must be listed on the label:
- Propan-2-ol
- 7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate

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: 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.

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>Components</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-(2-Butoxyethoxy)ethanol</td>
<td>112-34-5</td>
<td>Eye Irrit. 2; H319</td>
<td>&gt;= 50 - &lt; 70</td>
</tr>
<tr>
<td></td>
<td>203-961-6</td>
<td>603-096-08-0</td>
<td></td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>67-63-0</td>
<td>Flam. Liq. 2; H225</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
</tbody>
</table>
### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

<table>
<thead>
<tr>
<th>Substance</th>
<th>Description</th>
<th>Concentration</th>
<th>Aquatic Toxicity</th>
<th>M-Factor (Acute aquatic toxicity)</th>
<th>M-Factor (Chronic aquatic toxicity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate</td>
<td>Skin Sens. 1; H317</td>
<td>2386-87-0 219-207-4</td>
<td>&gt;= 1 - &lt; 10</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Ivermectin</td>
<td>Acute Tox. 2; H300 Acute Tox. 3; H311 STOT SE 1; H370 (Central nervous system) STOT RE 1; H372 (Central nervous system) Aquatic Acute 1; H400 Aquatic Chronic 1; H410</td>
<td>70288-86-7 274-536-0</td>
<td>&gt;= 0.25 - &lt; 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,6-Di-tert-butyl-p-cresol</td>
<td>Aquatic Acute 1; H400 Aquatic Chronic 1; H410</td>
<td>128-37-0 204-881-4</td>
<td>&gt;= 0.25 - &lt; 1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

For explanation of abbreviations see section 16.
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

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Date of first issue: 29.03.2017

4.1 If inhaled
If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

4.2 If inhaled
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.

4.3 If swallowed
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.

4.4 Most important symptoms and effects, both acute and delayed
Risks
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause drowsiness or dizziness.

4.5 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
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 dyeing or other appropriate containment to keep material from spreading. If dyed 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.
Avoid breathing 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.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take precautionary measures against static discharges.
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

<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>2-(2-Butoxyethoxy)ethanol</td>
<td>112-34-5</td>
<td>TWA</td>
<td>10 ppm 67.5 mg/m³</td>
<td>2006/15/EC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>15 ppm 101.2 mg/m³</td>
<td>2006/15/EC</td>
</tr>
</tbody>
</table>

Further information: Indicative

<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>OELV - 8 hrs (TWA)</td>
<td></td>
<td></td>
<td>10 ppm 67.5 mg/m³</td>
<td>IE OEL</td>
</tr>
<tr>
<td>OELV - 15 min (STEL)</td>
<td></td>
<td></td>
<td>15 ppm 101.2 mg/m³</td>
<td>IE OEL</td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>67-63-0</td>
<td>OELV - 8 hrs (TWA)</td>
<td>200 ppm</td>
<td>IE OEL</td>
</tr>
</tbody>
</table>

Further information: Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body

<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>OELV - 15 min (STEL)</td>
<td></td>
<td></td>
<td>400 ppm</td>
<td>IE OEL</td>
</tr>
</tbody>
</table>

Further information: Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body

<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>2,6-Di-tert-butyl-phenol</td>
<td>128-37-0</td>
<td>OELV - 8 hrs (TWA)</td>
<td>2 mg/m³</td>
<td>IE OEL</td>
</tr>
<tr>
<td>Ivermectin</td>
<td>70288-86-7</td>
<td>TWA</td>
<td>0.05 mg/m³ (OEB 3)</td>
<td>Internal</td>
</tr>
</tbody>
</table>

Further information: Skin

Wipe limit 0.5 mg/100 cm² Internal

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>End Use</th>
<th>Exposure routes</th>
<th>Potential health effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>0.18 mg/m³</td>
</tr>
</tbody>
</table>

| | Workers | Inhalation | Long-term local effects | 0.18 mg/m³ |
## Ivermectin (with Isopropyl Alcohol) Formulation

**Workers**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Environmental Compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propan-2-ol</td>
<td>Fresh water</td>
<td>0.05 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>500 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Intermittent use/release</td>
<td>888 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>89 mg/m³</td>
</tr>
<tr>
<td>Consumers</td>
<td>Fresh water</td>
<td>319 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>67.5 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Intermittent use/release</td>
<td>319 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>26 mg/kg bw/day</td>
</tr>
<tr>
<td>2-(2-Butoxyethoxy)ethanol</td>
<td>Fresh water</td>
<td>67.5 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>67.5 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Intermittent use/release</td>
<td>101.2 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>67.5 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Fresh water</td>
<td>40.5 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>40.5 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Intermittent use/release</td>
<td>40.5 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>40.5 mg/m³</td>
</tr>
</tbody>
</table>

**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>
</tr>
</thead>
<tbody>
<tr>
<td>7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate</td>
<td>Fresh water</td>
<td>0.024 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.0024 mg/l</td>
</tr>
<tr>
<td></td>
<td>Intermittent use/release</td>
<td>0.24 mg/l</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>19.5 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>0.211 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>0.0211 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>0.0282 mg/kg</td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>Fresh water</td>
<td>140.9 mg/l</td>
</tr>
</tbody>
</table>

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**SDS Number:** 1497024-00011  
**Date of last issue:** 09.04.2021  
**Date of first issue:** 29.03.2017
### Marine water
| 2-(2-Butoxyethoxy)ethanol | Fresh water | 1.1 mg/l |
| Freshwater - intermittent | 11 mg/l |
| Marine water | 0.11 mg/l |
| Sewage treatment plant | 200 mg/l |
| Fresh water sediment | 4.4 mg/kg dry weight (d.w.) |
| Marine sediment | 0.44 mg/kg dry weight (d.w.) |
| Soil | 0.32 mg/kg dry weight (d.w.) |
| Oral (Secondary Poisoning) | 56 mg/kg food |

### Fresh water sediment

| 2,6-Di-tert-butyl-p-cresol | Fresh water | 0.199 µg/l |
| Intermittent use/release | 0.02 µg/l |
| Marine water | 0.02 µg/l |
| Sewage treatment plant | 0.17 mg/l |
| Fresh water sediment | 0.0996 mg/kg dry weight (d.w.) |
| Marine sediment | 0.00996 mg/kg dry weight (d.w.) |
| Soil | 0.04769 mg/kg dry weight (d.w.) |
| Oral (Secondary Poisoning) | 8.33 mg/kg food |

#### 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 faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or
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 : Organic vapour type (A)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : liquid
Colour : yellow
Odour : solvent-like
Odour Threshold : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling range
Flammability (solid, gas) : Not applicable
Flammability (liquids) : Not applicable

Upper explosion limit / Upper flammability limit : No data available
Lower explosion limit / Lower flammability limit : No data available

Flash point : 28 °C
Auto-ignition temperature : No data available
Decomposition temperature : No data available
pH : No data available

Viscosity
Viscosity, kinematic : No data available
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Solubility(ies)
  Water solubility : No data available
  Partition coefficient: n-octanol/water : No data available
  Vapour pressure : No data available
  Relative density : No data available
  Density : 0.855 - 0.905 g/cm³
  Relative vapour density : No data available
  Particle characteristics
    Particle size : Not applicable

9.2 Other information
  Explosives : Not explosive
  Oxidizing properties : The substance or mixture is not classified as oxidizing.
  Evaporation rate : 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 : Inhalation
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exposure
Skin contact
Ingestion
Eye contact

Acute toxicity
Not classified based on available information.

Product:
Acute oral toxicity  :  Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Acute dermal toxicity  :  Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Components:

2-(2-Butoxyethoxy)ethanol:
Acute oral toxicity  :  LD50 (Mouse): 2,410 mg/kg

Acute dermal toxicity  :  LD50 (Rabbit): 2,764 mg/kg

Propan-2-ol:
Acute oral toxicity  :  LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity  :  LC50 (Rat): > 25 mg/l
  Exposure time: 6 h
  Test atmosphere: vapour

Acute dermal toxicity  :  LD50 (Rabbit): > 5,000 mg/kg

7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:
Acute oral toxicity  :  LD50 (Rat, male): 2,959 - 5,000 mg/kg
  Method: OECD Test Guideline 401

Acute inhalation toxicity  :  LC50 (Rat): >= 5.19 mg/l
  Exposure time: 4 h
  Test atmosphere: dust/mist
  Method: OECD Test Guideline 436
  Assessment: The substance or mixture has no acute inhalation toxicity

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

Ivermectin:
Acute oral toxicity  :  LD50 (Rat): 50 mg/kg

  LD50 (Mouse): 25 mg/kg
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LD50 (Monkey): > 24 mg/kg
Target Organs: Central nervous system
Symptoms: Vomiting, Dilatation of the pupil
Remarks: No mortality observed at this dose.

Acute inhalation toxicity: LC50 (Rat): 5.11 mg/l
Exposure time: 1 h
Test atmosphere: dust/mist

Acute dermal toxicity: LD50 (Rabbit): 406 mg/kg
LD50 (Rat): > 660 mg/kg

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
Not classified based on available information.

Components:

2-(2-Butoxyethoxy)ethanol:
Species: Rabbit
Method: OECD Test Guideline 404
Result: Mild skin irritation

Propan-2-ol:
Species: Rabbit
Result: No skin irritation

7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Ivermectin:
Species: Rabbit
Result: No skin irritation

2,6-Di-tert-butyl-p-cresol:
Species: Rabbit
Method: OECD Test Guideline 404
Ivermectin (with Isopropyl Alcohol) Formula-
tion

Result: No skin irritation
Remarks: Based on data from similar materials

Serious eye damage/eye irritation
Causes serious eye irritation.

Components:

2-(2-Butoxyethoxy)ethanol:
Species: Rabbit
Result: Irritation to eyes, reversing within 21 days

Propan-2-ol:
Species: Rabbit
Result: Irritation to eyes, reversing within 21 days

7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:
Species: Rabbit
Method: OECD Test Guideline 405
Result: No eye irritation

Ivermectin:
Species: Rabbit
Result: Mild 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:

2-(2-Butoxyethoxy)ethanol:
Test Type: Maximisation Test
Exposure routes: Skin contact
Species: Guinea pig
Result: negative

Propan-2-ol:
Test Type: Buehler Test
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**Exposure routes**: Skin contact  
**Species**: Guinea pig  
**Method**: OECD Test Guideline 406  
**Result**: negative

### 7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:

**Test Type**: Maximisation Test  
**Exposure routes**: Skin contact  
**Species**: Guinea pig  
**Result**: positive  
**Assessment**: Probability or evidence of skin sensitisation in humans

### Ivermectin:

**Exposure routes**: Dermal  
**Species**: Humans  
**Result**: Does not cause skin sensitisation.

### 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:

#### 2-(2-Butoxyethoxy)ethanol:

**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**: Mouse  
**Application Route**: Ingestion  
**Result**: negative

#### Propan-2-ol:

**Genotoxicity in vitro**  
**Test Type**: Bacterial reverse mutation assay (AMES)  
**Result**: negative
Ivermectin (with Isopropyl Alcohol) Formulation

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

Genotoxicity in vivo:
Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative

7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:
Genotoxicity in vitro:
Test Type: In vitro mammalian cell gene mutation test
Result: positive

Genotoxicity in vivo:
Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 486
Result: negative

Test Type: Micronucleus test
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative

Germ cell mutagenicity- Assessment:
Weight of evidence does not support classification as a germ cell mutagen.

Ivermectin:
Genotoxicity in vitro:
Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

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

Test Type: Mouse Lymphoma
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:

Propan-2-ol:
Species : Rat
Application Route : inhalation (vapour)
Exposure time : 104 weeks
Method : OECD Test Guideline 451
Result : negative

Ivermectin:
Species : Rat
Application Route : Oral
NOAEL : 1.5 mg/kg body weight
Result : negative
Remarks : Based on data from similar materials

Species : Mouse
Application Route : Oral
NOAEL : 2.0 mg/kg body weight
Result : negative
Remarks : Based on data from similar materials

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

Reproductive toxicity
Not classified based on available information.

Components:

2-(2-Butoxyethoxy)ethanol:
Effects on fertility : Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 415
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
### Application Route: Ingestion

#### Result: negative

#### Propan-2-ol:
**Effects on fertility**: Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

**Effects on foetal development**: Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Result: negative

#### 7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:
**Effects on foetal development**: Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative

#### Ivermectin:
**Effects on fertility**: Test Type: Fertility
Species: Rat
Application Route: Oral
Fertility: NOAEL: 0.6 mg/kg body weight
Result: Animal testing did not show any effects on fertility.

**Effects on foetal development**: Test Type: Development
Species: Mouse
Application Route: Oral
Developmental Toxicity: NOAEL: 0.2 mg/kg body weight
Result: Teratogenic effects, Embryotoxic effects and adverse effects on the offspring were detected only at high maternally toxic doses

Test Type: Development
Species: Rat
Application Route: Oral
Developmental Toxicity: LOAEL: 0.4 mg/kg body weight
Result: Embryotoxic effects and adverse effects on the offspring were detected.
Remarks: The mechanism or mode of action may not be relevant in humans.

Test Type: Development
Species: Rabbit
Application Route: Oral
Result: Teratogenic effects, Embryotoxic effects and adverse effects on the offspring were detected only at high maternally toxic doses
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tion

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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: Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Result: negative

STOT - single exposure
May cause drowsiness or dizziness.

Components:

Propan-2-ol:
Assessment: May cause drowsiness or dizziness.

Ivermectin:
Target Organs: Central nervous system
Assessment: Causes damage to organs.

STOT - repeated exposure
Not classified based on available information.

Components:

Ivermectin:
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:

2-(2-Butoxyethoxy)ethanol:
Species: Rat
NOAEL: 250 mg/kg
LOAEL: 1,000 mg/kg
Application Route: Ingestion
Exposure time: 90 Days
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<table>
<thead>
<tr>
<th>Method</th>
<th>OECD Test Guideline 408</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species</td>
<td>Rat</td>
</tr>
<tr>
<td>NOAEL</td>
<td>&gt;= 0.094 mg/l</td>
</tr>
<tr>
<td>Application Route</td>
<td>Inhilation (vapour)</td>
</tr>
<tr>
<td>Exposure time</td>
<td>90 Days</td>
</tr>
</tbody>
</table>

### NOAEL:

<table>
<thead>
<tr>
<th>Method</th>
<th>OECD Test Guideline 413</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species</td>
<td>Rat</td>
</tr>
<tr>
<td>NOAEL</td>
<td>&gt;= 2,000 mg/kg</td>
</tr>
<tr>
<td>Application Route</td>
<td>Skin contact</td>
</tr>
<tr>
<td>Exposure time</td>
<td>90 Days</td>
</tr>
</tbody>
</table>

### Propan-2-ol:

| Species | Rat                     |
| NOAEL  | 12.5 mg/l               |
| Application Route | Inhilation (vapour) |
| Exposure time | 104 Weeks              |

### Ivermectin:

| Species | Dog                     |
| NOAEL  | 0.5 mg/kg               |
| LOAEL  | 1 mg/kg                 |
| Application Route | Oral                   |
| Exposure time | 14 Weeks               |
| Target Organs | Central nervous system |
| Symptoms | Dilatation of the pupil, Tremors, Lack of coordination, anorexia |

| Species | Monkey                 |
| NOAEL  | 1.2 mg/kg              |
| Application Route | Oral                   |
| Exposure time | 2 Weeks               |
| Remarks | No significant adverse effects were reported |

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

| Species | Rat                     |
| NOAEL  | 25 mg/kg                |
| Application Route | Ingestion |
| Exposure time | 22 Months              |

### Aspiration toxicity

Not classified based on available information.
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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:

Ivermectin:
Skin contact: Remarks: Can be absorbed through skin.
Eye contact: Remarks: May irritate eyes.
Ingestion: Symptoms: Drowsiness, Dilatation of the pupil, Tremors, Vomiting, anorexia, Lack of coordination

SECTION 12: Ecological information

12.1 Toxicity

Components:

2-(2-Butoxyethoxy)ethanol:
Toxicity to fish: LC50 (Lepomis macrochirus (Bluegill sunfish)): 1,300 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants: ErC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

NOEC (Desmodesmus subspicatus (green algae)): >= 100 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

Toxicity to microorganisms: EC10 : > 1,995 mg/l
Exposure time: 30 min

Propan-2-ol:
Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): 9,640 mg/l
Exposure time: 96 h
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**according to Regulation (EC) No. 1907/2006**

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<tr>
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</tr>
</tbody>
</table>

**Toxicity to daphnia and other aquatic invertebrates**

- EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
  Exposure time: 24 h

**Toxicity to microorganisms**

- EC50 (Pseudomonas putida): > 1,050 mg/l
  Exposure time: 16 h

**7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:**

**Toxicity to fish**

- LC50 (Oncorhynchus mykiss (rainbow trout)): 24 mg/l
  Exposure time: 96 h
  Method: OECD Test Guideline 203

**Toxicity to daphnia and other aquatic invertebrates**

- EC50 (Daphnia magna (Water flea)): 40 mg/l
  Exposure time: 48 h
  Method: OECD Test Guideline 202

**Toxicity to algae/aquatic plants**

- ErC50 (Selenastrum capricornutum (green algae)): > 110 mg/l
  Exposure time: 72 h
  Method: OECD Test Guideline 201

  NOEC (Selenastrum capricornutum (green algae)): 30 mg/l
  Exposure time: 72 h
  Method: OECD Test Guideline 201

**Toxicity to microorganisms**

- EC10 (Natural microorganism): 409 mg/l
  Exposure time: 3 h
  Method: OECD Test Guideline 209

**Ivermectin:**

**Toxicity to fish**

- LC50 (Oncorhynchus mykiss (rainbow trout)): 0.003 mg/l
  Exposure time: 96 h

- LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.0048 mg/l
  Exposure time: 96 h

**Toxicity to daphnia and other aquatic invertebrates**

- EC50 (Daphnia magna (Water flea)): 0.000025 mg/l
  Exposure time: 48 h

**Toxicity to algae/aquatic plants**

- EC50 (Pseudokirchneriella subcapitata (green algae)): > 9.1 mg/l
  Exposure time: 72 h
  Method: OECD Test Guideline 201

  NOEC (Pseudokirchneriella subcapitata (green algae)): 9.1 mg/l
  Exposure time: 72 h
  Method: OECD Test Guideline 201

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

- 10,000

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

- 10,000
## Ivermectin (with Isopropyl Alcohol) Formulation

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<thead>
<tr>
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<th>SDS Number:</th>
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</tr>
</tbody>
</table>

### 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:

**2-(2-Butoxyethoxy)ethanol:**
- Biodegradability: Result: Readily biodegradable.
  - Biodegradation: 85 %
  - Exposure time: 28 d
  - Method: OECD Test Guideline 301C

**Propan-2-ol:**
- Biodegradability: Result: rapidly degradable
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BOD/COD:  BOD: 1.19 (BOD5)  COD: 2.23  BOD/COD: 53 %

7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:
Biodegradability:  Biodegradation: 71 %  Exposure time: 28 d  Method: OECD Test Guideline 301B
Stability in water:  Degradation half life (DT50): 2 d

Ivermectin:
Biodegradability:  Result: Not readily biodegradable.  Biodegradation: 50 %  Exposure time: 240 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:

2-(2-Butoxyethoxy)ethanol:
Partition coefficient: n-octanol/water:  log Pow: 1

Propan-2-ol:
Partition coefficient: n-octanol/water:  log Pow: 0.05

7-Oxabicyclo[4.1.0]hept-3-ylmethyl 7-oxabicyclo[4.1.0]heptane-3-carboxylate:
Partition coefficient: n-octanol/water:  log Pow: 1.34

Ivermectin:
Bioaccumulation:  Bioconcentration factor (BCF): 74
Partition coefficient: n-octanol/water:  log Pow: 3.22

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
No data available

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.

12.6 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.

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
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14.2 UN proper shipping name

ADN : FLAMMABLE LIQUID, N.O.S. (Propan-2-ol)
ADR : FLAMMABLE LIQUID, N.O.S. (Propan-2-ol)
RID : FLAMMABLE LIQUID, N.O.S. (Propan-2-ol)
IMDG : FLAMMABLE LIQUID, N.O.S. (Propan-2-ol, Ivermectin, 2,6-Di-tert-butyl-p-cresol)
IATA : Flammable liquid, n.o.s. (Propan-2-ol)

14.3 Transport hazard class(es)

ADN : 3
ADR : 3
RID : 3
IMDG : 3
IATA : 3

14.4 Packing group

ADN
Packing group : III
Classification Code : F1
Hazard Identification Number : 30
Labels : 3

ADR
Packing group : III
Classification Code : F1
Hazard Identification Number : 30
Labels : 3
Tunnel restriction code : (D/E)

RID
Packing group : III
Classification Code : F1
Hazard Identification Number : 30
Labels : 3

IMDG
Packing group : III
Labels : 3
EmS Code : F-E, S-E

IATA (Cargo)
Packing instruction (cargo aircraft) : 366
Packing instruction (LQ) : Y344
Packing group : III
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Labels: Flammable Liquids

IATA (Passenger) 
Packing instruction (passen-
ger aircraft): 355 
Packing instruction (LQ): Y344 
Packing group: III 
Labels: Flammable Liquids

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.

14.7 Maritime transport in bulk according to IMO instruments

Remarks: Not applicable for product as supplied.

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 2-(2-Butoxyethoxy)ethanol (Number on list 55)

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59): Not applicable

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: Not applicable

REACH - List of substances subject to authorisation (Annex XIV): Not applicable

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P5c FLAMMABLE LIQUIDS Quantity 1 5,000 t Quantity 2 50,000 t
E1 ENVIRONMENTAL HAZARDS 100 t 200 t

Other regulations:
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.

Full text of H-Statements
H225 : Highly flammable liquid and vapour.
H300 : Fatal if swallowed.
H311 : Toxic in contact with skin.
H317 : May cause an allergic skin reaction.
H319 : Causes serious eye irritation.
H336 : May cause drowsiness or dizziness.
H370 : Causes damage to organs if swallowed.
H372 : Causes damage to organs through prolonged or repeated exposure if swallowed.
H400 : Very toxic to aquatic life.
H410 : Very toxic 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
Eye Irrit. : Eye irritation
Flam. Liq. : Flammable liquids
Skin Sens. : Skin sensitisation
STOT RE : Specific target organ toxicity - repeated exposure
STOT SE : Specific target organ toxicity - single exposure
2006/15/EC : Europe. Indicative occupational exposure limit values
IE OEL : Ireland. List of Chemical Agents and Occupational Exposure Limit Values - Schedule 1
2006/15/EC / TWA : Limit Value - eight hours
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## SAFETY DATA SHEET

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<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Value</th>
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<tbody>
<tr>
<td>2006/EC/STEL</td>
<td>: Short term exposure limit</td>
<td></td>
</tr>
<tr>
<td>IE OEL / OELV - 8 hrs (TWA)</td>
<td>: Occupational exposure limit value (8-hour reference period)</td>
<td></td>
</tr>
<tr>
<td>IE OEL / OELV - 15 min (STEL)</td>
<td>: Occupational exposure limit value (15-minute reference period)</td>
<td></td>
</tr>
</tbody>
</table>

**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;**  
**CMR - Carcinogen, Mutagen or Reproductive Toxicant;**  
**DIN - 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;**  
**IC 50 - 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;**  
**LC 50 - Lethal Concentration to 50 % of a test population;**  
**LD 50 - Lethal Dose to 50% of a test population;**  
**MEARPOL - 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;**  
**OELV - Occupational exposure limit value;**  
**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;**  
**RID - Regulations concerning the International Carriage of Dangerous Goods by Rail;**  
**SADT - 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**

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

**Classification of the mixture:**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Code</th>
<th>Based on product data or assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flam. Liq. 3</td>
<td>H226</td>
<td></td>
</tr>
<tr>
<td>Eye Irrit. 2</td>
<td>H319</td>
<td></td>
</tr>
<tr>
<td>Skin Sens. 1</td>
<td>H317</td>
<td></td>
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<tr>
<td>STOT SE 3</td>
<td>H336</td>
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<tr>
<td>Aquatic Acute 1</td>
<td>H400</td>
<td></td>
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<tr>
<td>Aquatic Chronic 1</td>
<td>H410</td>
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</tr>
</tbody>
</table>

**Classification procedure:**

- Based on product data or assessment
- Calculation method
- Calculation method
- Calculation method
- Calculation method
- Calculation method
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