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

Indoxacarb / Permethrin Formulation

Version 3.3  Revision Date: 27.08.2021  SDS Number: 27897-00017  Date of last issue: 17.03.2021
Date of first issue: 04.11.2014

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

1.1 Product identifier
Trade name: Indoxacarb / Permethrin 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
Kilsheean
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)
- Acute toxicity, Category 4: H302: Harmful if swallowed.
- Acute toxicity, Category 4: H332: Harmful if inhaled.
- 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.
- Specific target organ toxicity - repeated exposure, Category 1: H372: Causes damage to organs through prolonged or repeated exposure.
- 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: Danger
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Hazard statements:
- H226 Flammable liquid and vapour.
- H302 + H332 Harmful if swallowed or if inhaled.
- H317 May cause an allergic skin reaction.
- H336 May cause drowsiness or dizziness.
- H372 Causes 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:
- P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
- P314 Get medical advice/ attention if you feel unwell.
- P391 Collect spillage.

Hazardous components which must be listed on the label:
Permethrin (ISO)
1-Methoxy-2-propanol
Indoxacarb (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: 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

Components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permethrin (ISO)</td>
<td>52645-53-1</td>
<td>Acute Tox. 4; H302</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
<tr>
<td>Material</td>
<td>UN Number</td>
<td>Acute Tox.</td>
<td>M-Factor (Acute aquatic toxicity):</td>
</tr>
<tr>
<td>-------------------</td>
<td>------------</td>
<td>------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>1-Methoxy-2-propanol</td>
<td>107-98-2</td>
<td>480 mg/kg</td>
<td>10.000</td>
</tr>
<tr>
<td></td>
<td>203-539-1</td>
<td>2,3 mg/l</td>
<td></td>
</tr>
<tr>
<td></td>
<td>603-064-00-3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indoxacarb (ISO)</td>
<td>173584-44-6</td>
<td>179 mg/kg</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>607-700-00-0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms occur.

In case of skin contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

In case of eye contact: Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.

If swallowed: If swallowed, DO NOT induce vomiting. Get medical attention. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Risks: Harmful if swallowed or if inhaled. May cause an allergic skin reaction. May cause drowsiness or dizziness. Causes 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

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
- Chlorine 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 spills 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 diking 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. Avoid contact with 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. 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.

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
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>Permethrin (ISO)</td>
<td>52645-53-1</td>
<td>TWA</td>
<td>80 µg/m³ (OEB 3)</td>
<td>Internal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wipe limit</td>
<td>800 µg/100 cm²</td>
<td>Internal</td>
</tr>
<tr>
<td>1-Methoxy-2-propanol</td>
<td>107-98-2</td>
<td>TWA</td>
<td>50 ppm</td>
<td>FOR-2011-12-06-1358</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>180 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

Further information: Chemicals that can be absorbed through the skin.

|                             | STEL          | 150 ppm                       | 568 mg/m³          | 2000/39/EC          |

Further information: Identifies the possibility of significant uptake through the skin, Indicative.

|                             | TWA           | 100 ppm                       | 375 mg/m³          | 2000/39/EC          |

Further information: Identifies the possibility of significant uptake through the skin, Indicative.

| Indoxacarb (ISO)            | 173584-44-6   | TWA                           | 20 µg/m³           | Internal            |
|                             |               |                               |                    |                     |

Further information: Skin sensitisation

|                             | Wipe limit    | 100 µg/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>1-Methoxy-2-propanol</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>369 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>Acute systemic effects</td>
<td>553,5 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>Acute local effects</td>
<td>553,5 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>183 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>43,9 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>78 mg/kg</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Effects</th>
<th>Consumers</th>
<th>Ingestion Long-term systemic effects</th>
<th>33 mg/kg bw/day</th>
</tr>
</thead>
</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>1-Methoxy-2-propanol</td>
<td>Fresh water</td>
<td>10 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>1 mg/l</td>
</tr>
<tr>
<td></td>
<td>Freshwater - intermittent</td>
<td>100 mg/l</td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>100 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>52.3 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>5.2 mg/kg dry weight (d.w.)</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>4.59 mg/kg dry weight (d.w.)</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Engineering measures
Minimize workplace exposure concentrations.
If sufficient ventilation is unavailable, use with local exhaust ventilation.
Use explosion-proof electrical, ventilating and lighting equipment.

Personal protective equipment

Eye protection : Wear the following personal protective equipment:
Safety glasses
Equipment should conform to NS EN 166

Hand protection

Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Take note that the product is flammable, which may impact the selection of hand protection. Wash hands before breaks and at the end of workday.

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Wear the following personal protective equipment:
If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

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 NS 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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Clear white to yellow.</td>
</tr>
<tr>
<td>Odour</td>
<td>ether-like</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (liquids)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit / Upper flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit / Lower flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>33.5 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>No data available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.096</td>
</tr>
<tr>
<td>Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Particle characteristics</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Particle size</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

9.2 Other information

Explosives                                     : Not explosive
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 or if inhaled.

Product:
Acute oral toxicity: Acute toxicity estimate: 609.38 mg/kg Method: Calculation method

Acute inhalation toxicity: Acute toxicity estimate: 4.48 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method

Components:
Permethrin (ISO):
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</tr>
</tbody>
</table>

### Acute oral toxicity

- **Indoxacarb (ISO):**
  - LD50 (Rat, female): 179 mg/kg
  - Symptoms: Loss of reflexes, Breathing difficulties, Tremors
  - LD50 (Rat, male): 843 mg/kg
  - Acute toxicity estimate: 179 mg/kg
  - Method: Calculation method

- **1-Methoxy-2-propanol:**
  - LD50 (Rat): 4.016 mg/kg

### Acute inhalation toxicity

- **Indoxacarb (ISO):**
  - LC50 (Rat, female): 4.2 mg/l
  - Exposure time: 4 h
  - Test atmosphere: dust/mist
  - Acute toxicity estimate: 4.2 mg/l
  - Test atmosphere: dust/mist
  - Method: Calculation method

- **1-Methoxy-2-propanol:**
  - LC50 (Mouse): < 22.2 mg/l
  - Exposure time: 6 h
  - Test atmosphere: vapour

### Acute dermal toxicity

- **Indoxacarb (ISO):**
  - LD50 (Rat, male and female): > 5.000 mg/kg
- **1-Methoxy-2-propanol:**
  - LD50 (Rat): > 2.000 mg/kg

### Skin corrosion/irritation

Not classified based on available information.

### Components:

**Permethrin (ISO):**

- Species: Rabbit
Result : No skin irritation

1-Methoxy-2-propanol:
Species : Rabbit
Result : No skin irritation

Indoxacarb (ISO):
Result : No skin irritation

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

Components:
Permethrin (ISO):
Species : Rabbit
Result : No eye irritation

1-Methoxy-2-propanol:
Species : Rabbit
Result : No eye irritation

Indoxacarb (ISO):
Result : No eye irritation

Respiratory or skin sensitisation

Skin sensitisation
May cause an allergic skin reaction.

Respiratory sensitisation
Not classified based on available information.

Components:
Permethrin (ISO):
Test Type : Buehler Test
Exposure routes : Skin contact
Species : Guinea pig
Result : positive

Assessment : Probability or evidence of skin sensitisation in humans

1-Methoxy-2-propanol:
Test Type : Maximisation Test
Exposure routes : Skin contact
Species : Guinea pig
Result : negative
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Indoxacarb (ISO):
Test Type: Maximisation Test
Species: Guinea pig
Result: positive

Germ cell mutagenicity
Not classified based on available information.

Components:

Permethrin (ISO):
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

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

Test Type: Chromosome aberration test in vitro
Result: positive

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

Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Mouse
Result: negative

Test Type: Rodent dominant lethal test (germ cell) (in vivo)
Species: Mouse
Result: negative

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

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

Germ cell mutagenicity - As - Weight of evidence does not support classification as a germ
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</tbody>
</table>

1-Methoxy-2-propanol:
Genotoxicity in vitro:
- **Test Type:** Bacterial reverse mutation assay (AMES)
  - Result: negative
- **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: equivocal
- **Test Type:** DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
  - **Method:** OECD Test Guideline 482
  - Result: negative

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

**Indoxacarb (ISO):**
Genotoxicity in vitro:
- **Test Type:** Bacterial reverse mutation assay (AMES)
  - Result: negative
- **Test Type:** Chromosomal aberration
  - **Test system:** mammalian cells
  - Result: negative
- **Test Type:** In vitro mammalian cell gene mutation test
  - **Test system:** Chinese hamster ovary cells
  - Result: negative

Genotoxicity in vivo:
- **Test Type:** Micronucleus test
  - **Species:** Mouse
  - **Cell type:** Bone marrow
  - Result: negative

**Carcinogenicity**
Not classified based on available information.

**Components:**

**Permethrin (ISO):**
- **Species:** Rat
- **Result:** negative
Species : Mouse
Result : negative

1-Methoxy-2-propanol:
Species : Rat
Application Route : inhalation (vapour)
Exposure time : 2 Years
Method : OECD Test Guideline 453
Result : negative

Indoxacarb (ISO):
Species : Rat, male and female
Application Route : oral (feed)
Exposure time : 2 Years
Frequency of Treatment : daily
Result : negative

Species : Mouse, male and female
Application Route : oral (feed)
Exposure time : 18 Months
Frequency of Treatment : daily
Result : negative

Reproductive toxicity
Not classified based on available information.

Components:

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

Effects on foetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Result: negative

1-Methoxy-2-propanol:
Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapour)
Method: OECD Test Guideline 416
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: inhalation (vapour)
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Result: negative

**Indoxacarb (ISO):**

**Effects on fertility**

- Test Type: Two-generation study
- Species: Rat
- Application Route: Oral
- General Toxicity F1: NOAEL: 1,3 mg/kg body weight
  Result: negative

- Test Type: Two-generation study
- Species: Rat
- Application Route: Oral
- General Toxicity - Parent: NOAEL: 1,3 mg/kg body weight
- General Toxicity F1: NOAEL: > 6,7 mg/kg body weight
  Result: Embryotoxic effects and adverse effects on the offspring were detected.

**Effects on foetal development**

- Test Type: Development
- Species: Rat
- Developmental Toxicity: NOAEL: 2 mg/kg body weight
  Result: No teratogenic effects

- Test Type: Development
- Species: Rabbit
- Application Route: Oral
- Developmental Toxicity: NOAEL: 500 mg/kg body weight
  Result: No adverse effects

- Test Type: Development
- Species: Rat
- Application Route: Oral
- Developmental Toxicity: NOAEL: 10 mg/kg body weight

- Test Type: Development
- Species: Rat
- Application Route: Oral
- Developmental Toxicity: LOAEL: 100 mg/kg body weight

**STOT - single exposure**

May cause drowsiness or dizziness.

**Components:**

**1-Methoxy-2-propanol:**

Assessment: May cause drowsiness or dizziness.

**STOT - repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

**Components:**

**Indoxacarb (ISO):**

Target Organs: Blood, Nervous system, Heart
Assessment: Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

Permethrin (ISO):
Species: Rat
NOAEL: 0.2201 mg/l
Application Route: Inhalation
Exposure time: 90 Days

Species: Rat
NOAEL: 175 mg/kg
Application Route: Ingestion
Exposure time: 90 Days

1-Methoxy-2-propanol:
Species: Rat
NOAEL: 919 mg/kg
Application Route: Ingestion
Exposure time: 35 Days

Species: Rat
NOAEL: 1.1 mg/l
Application Route: Inhalation (vapour)
Exposure time: 2 yr
Method: OECD Test Guideline 453

Species: Rabbit
NOAEL: 1.838 mg/kg
Application Route: Skin contact
Exposure time: 90 Days

Indoxacarb (ISO):
Species: Rat, male and female
NOAEL: 1.7 mg/kg
LOAEL: 4.1 mg/kg
Application Route: Oral
Exposure time: 90 d
Target Organs: Blood, Central nervous system

Species: Rat, male and female
NOAEL: 50 mg/kg
LOAEL: 500 mg/kg
Application Route: Dermal
Exposure time: 28 d
Target Organs: Blood

Species: Rat
NOAEL: 4.6 mg/m³
**Indoxacarb / Permethrin Formulation**

<table>
<thead>
<tr>
<th>LOAEL</th>
<th>23 mg/m3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Route</td>
<td>Inhalation</td>
</tr>
<tr>
<td>Exposure time</td>
<td>4 Weeks</td>
</tr>
<tr>
<td>Target Organs</td>
<td>Blood, Lungs</td>
</tr>
</tbody>
</table>

**Species** : Rat, male and female  
**NOAEL** : 1 mg/kg  
**LOAEL** : 2 mg/kg  
**Application Route** : Oral  
**Exposure time** : 1 yr  
**Target Organs** : Blood

**Species** : Dog  
**NOAEL** : 1 mg/kg  
**LOAEL** : 2 mg/kg  
**Application Route** : Oral  
**Exposure time** : 1 yr  
**Target Organs** : Blood

**Species** : Mouse  
**NOAEL** : 3 mg/kg  
**LOAEL** : 14 mg/kg  
**Application Route** : oral (feed)  
**Exposure time** : 18 Months  
**Target Organs** : Nervous system, Heart

**Aspiration toxicity**  
Not classified based on available information.

**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:**

**Indoxacarb (ISO):**

**General Information** : No human information is available.

**SECTION 12: Ecological information**

**12.1 Toxicity**

**Components:**

**Permethrin (ISO):**
## Indoxacarb / Permethrin Formulation

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Toxicity to fish</strong> ( LC50 )</td>
<td>(Lepomis macrochirus (Bluegill sunfish)): 0,00079 mg/l, Exposure time: 96 h</td>
</tr>
<tr>
<td><strong>Toxicity to daphnia and other aquatic invertebrates</strong> ( EC50 )</td>
<td>(Daphnia magna (Water flea)): 0,0001 mg/l, Exposure time: 48 h</td>
</tr>
<tr>
<td><strong>Toxicity to algae/aquatic plants</strong> ( ErC50 )</td>
<td>(Pseudokirchneriella subcapitata (green algae)): &gt; 1,13 mg/l, Exposure time: 72 h</td>
</tr>
<tr>
<td><strong>Toxicity to algae/aquatic plants</strong> ( EC10 )</td>
<td>(Pseudokirchneriella subcapitata (green algae)): 0,0023 mg/l, Exposure time: 72 h</td>
</tr>
<tr>
<td><strong>M-Factor (Acute aquatic toxicity)</strong></td>
<td>10.000</td>
</tr>
<tr>
<td><strong>Toxicity to microorganisms</strong> ( EC50 )</td>
<td>&gt; 1.000 mg/l, Exposure time: 3 h</td>
</tr>
<tr>
<td><strong>Toxicity to fish (Chronic toxicity)</strong></td>
<td>NOEC: 0,00041 mg/l, Exposure time: 35 d, Species: Danio rerio (zebra fish), Method: OECD Test Guideline 210</td>
</tr>
<tr>
<td><strong>Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)</strong></td>
<td>NOEC: 0,0047 µg/l, Exposure time: 21 d, Species: Daphnia magna (Water flea), Method: OECD Test Guideline 211</td>
</tr>
<tr>
<td><strong>M-Factor (Chronic aquatic toxicity)</strong></td>
<td>10.000</td>
</tr>
<tr>
<td><strong>1-Methoxy-2-propanol:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Toxicity to fish</strong> ( LC50 )</td>
<td>(Leuciscus idus (Golden orfe)): 6.812 mg/l, Exposure time: 96 h, Method: DIN 38412</td>
</tr>
<tr>
<td><strong>Toxicity to daphnia and other aquatic invertebrates</strong> ( EC50 )</td>
<td>(Daphnia magna (Water flea)): 23.300 mg/l, Exposure time: 48 h</td>
</tr>
<tr>
<td><strong>Toxicity to algae/aquatic plants</strong> ( ErC50 )</td>
<td>(Skeletonema costatum (marine diatom)): 6.745 mg/l, Exposure time: 72 h, Method: ISO 10253</td>
</tr>
<tr>
<td><strong>Toxicity to microorganisms</strong> ( IC50 )</td>
<td>&gt; 1.000 mg/l, Exposure time: 3 h, Method: OECD Test Guideline 209</td>
</tr>
</tbody>
</table>

### Indoxacarb (ISO):

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Toxicity to fish</strong> ( LC50 )</td>
<td>(Oncorhynchus mykiss (rainbow trout)): 0,65 mg/l, Exposure time: 96 h, Method: OECD Test Guideline 203</td>
</tr>
</tbody>
</table>
LC50 (Lepomis macrochirus (Bluegill sunfish)): 0,9 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates:
EC50 (Daphnia magna (Water flea)): 0,6 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants:
EC50 (Pseudokirchneriella subcapitata (green algae)): > 0,6 mg/l
Exposure time: 72 h

NOEC (Pseudokirchneriella subcapitata (green algae)): 0,46 mg/l
Exposure time: 72 h

M-Factor (Acute aquatic toxicity): 1

M-Factor (Chronic aquatic toxicity): 1

12.2 Persistence and degradability

Components:

Permethrin (ISO):
Biodegradability: Result: Not readily biodegradable.
Method: OECD Test Guideline 301F

1-Methoxy-2-propanol:
Biodegradability: Result: Readily biodegradable.
Biodegradation: 96 %
Exposure time: 28 d
Method: OECD Test Guideline 301E

12.3 Bioaccumulative potential

Components:

Permethrin (ISO):
Bioaccumulation: Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 570

Partition coefficient: n-octanol/water: log Pow: 4,67

1-Methoxy-2-propanol:
Partition coefficient: n-octanol/water: log Pow: < 1
Indoxacarb / Permethrin Formulation

12.4 Mobility in soil

Components:

Indoxacarb (ISO):
Distribution among environmental compartments : log Koc: 3.9

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
### Indoxacarb / Permethrin 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>
</thead>
<tbody>
<tr>
<td>3.3</td>
<td>27.08.2021</td>
<td>27897-00017</td>
<td>17.03.2021</td>
<td>04.11.2014</td>
</tr>
</tbody>
</table>

| ADN     | : UN 3092       |
| ADR     | : UN 3092       |
| RID     | : UN 3092       |
| IMDG    | : UN 3092       |
| IATA    | : UN 3092       |

#### 14.2 UN proper shipping name

| ADN     | : 1-METHOXY-2-PROANOL, SOLUTION |
| ADR     | : 1-METHOXY-2-PROANOL, SOLUTION |
| RID     | : 1-METHOXY-2-PROANOL, SOLUTION |
| IMDG    | : 1-METHOXY-2-PROANOL, SOLUTION (Permethrin (ISO), Indoxacarb (ISO)) |
| IATA    | : 1-Methoxy-2-propanol, solution |

#### 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-D  |

| IATA (Cargo) | Packing instruction (cargo) : 366  |
SAFETY DATA SHEET  
according to Regulation (EC) No. 1907/2006

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Revision Date: 27.08.2021  
SDS Number: 27897-00017  
Date of last issue: 17.03.2021  
Date of first issue: 04.11.2014

Packing instruction (LQ) : Y344  
Packing group : III  
Labels : Flammable Liquids

IATA (Passenger)  
Packing instruction (passenger 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  
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Not applicable  
REACH - List of substances subject to authorisation (Annex XIV) : 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  

Quantity 1 :  
Quantity 2 :
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Date of first issue: 04.11.2014

P5c  FLAMMABLE LIQUIDS  5.000 t  50.000 t

E1  ENVIRONMENTAL HAZARDS  100 t  200 t

Other regulations:
Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.
Young people under the age of 18 are not allowed to use or be exposed to the product professionally. Young people above the age of 15 are, however, except from this rule if the product is a necessary part of their education.

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
H226 : Flammable liquid and vapour.
H301 : Toxic if swallowed.
H302 : Harmful if swallowed.
H317 : May cause an allergic skin reaction.
H332 : Harmful if inhaled.
H336 : May cause drowsiness or dizziness.
H372 : Causes damage to organs through prolonged or repeated exposure.
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
Flam. Liq. : Flammable liquids
Skin Sens. : Skin sensitisation
STOT RE : Specific target organ toxicity - repeated exposure
STOT SE : Specific target organ toxicity - single exposure
FOR-2011-12-06-1358 : Norway. Occupational Exposure limits
2000/39/EC / TWA : Limit Value - eight hours
2000/39/EC / STEL : Short term exposure limit
SAFETY DATA SHEET
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<table>
<thead>
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<td>04.11.2014</td>
</tr>
</tbody>
</table>

FOR-2011-12-06-1358 / : Long term exposure limit

TWA

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 - 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; 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; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information:


Classification of the mixture:

<table>
<thead>
<tr>
<th>Classification procedure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Based on product data or assessment</td>
</tr>
</tbody>
</table>

| Flam. Liq. 3 | H226 |
| Acute Tox. 4 | H302 |
| Acute Tox. 4 | H332 |
| Skin Sens. 1 | H317 |
| STOT SE 3 | H336 |
| STOT RE 1 | H372 |
| Aquatic Acute 1 | H400 |
| Aquatic Chronic 1 | H410 |
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.