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

1.1 Product identifier
   Trade name : Indoxacarb 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
   20 Spartan Road
   1619 Spartan, South Africa
   Telephone : +27119239300
   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 2
   Acute toxicity, Category 4
   Eye irritation, Category 2
   Skin sensitisation, Category 1
   Specific target organ toxicity - single exposure, Category 3
   Specific target organ toxicity - repeated exposure, Category 1
   Long-term (chronic) aquatic hazard, Category 2
   H225: Highly flammable liquid and vapour.
   H302: Harmful if swallowed.
   H319: Causes serious eye irritation.
   H317: May cause an allergic skin reaction.
   H336: May cause drowsiness or dizziness.
   H372: Causes damage to organs through prolonged or repeated exposure.
   H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements
   Labelling (REGULATION (EC) No 1272/2008)
   Hazard pictograms : 
   Signal word : Danger
   Hazard statements :
   H225 Highly flammable liquid and vapour.
   H302 Harmful if swallowed.
   H317 May cause an allergic skin reaction.
H319  Causes serious eye irritation.
H336  May cause drowsiness or dizziness.
H372  Causes damage to organs through prolonged or re-
petated exposure.
H411  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.
P233  Keep container tightly closed.
P273  Avoid release to the environment.
P280  Wear protective gloves/ protective clothing/ eye protec-
tion/ 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.
P391  Collect spillage.

Hazardous components which must be listed on the label:
Propan-2-ol
Indoxacarb (ISO)

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumula-
tive and toxic (PBT), or very persistent and very bioaccumulative (vPvB) 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>EC-No.</th>
<th>Index-No.</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propan-2-ol</td>
<td>67-63-0</td>
<td>200-661-7</td>
<td>603-117-00-0</td>
<td>Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
<tr>
<td>Indoxacarb (ISO)</td>
<td>173584-44-6</td>
<td>607-700-00-0</td>
<td></td>
<td>Acute Tox. 3; H301 Acute Tox. 4; H332 Skin Sens. 1B; H317 STOT RE 1; H372 (Blood, Nervous system, Heart) Aquatic Acute 1; H400 Aquatic Chronic 1;</td>
<td>&gt;= 10 - &lt; 20</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. 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: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention.

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

4.2 Most important symptoms and effects, both acute and delayed

Risks: Harmful if swallowed. May cause an allergic skin reaction. Causes serious eye irritation. 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

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

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.
- Ventilate the area.
- 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.
- 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
- 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>Occupational Exposure Limits</th>
<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></td>
<td>Propan-2-ol</td>
<td>67-63-0</td>
<td>TWA OEL-RL</td>
<td>400 ppm 960 mg/m³</td>
<td>ZA OEL</td>
</tr>
<tr>
<td></td>
<td>Indoxacarb (ISO)</td>
<td>173584-44-6</td>
<td>TWA</td>
<td>20 µg/m³</td>
<td>Internal</td>
</tr>
</tbody>
</table>

Further information: Absorption through the skin, Recommended Limit

Further information: Absorption through the skin, Recommended Limit

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>Ethyl Acetoacetate</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>29,1667 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>8,333 mg/kg bw/day</td>
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<tr>
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<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>6,25 mg/m³</td>
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<tr>
<td></td>
<td>Consumers</td>
<td>Skin contact</td>
<td>Long-term systemic effects</td>
<td>4,167 mg/kg bw/day</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Ingestion</td>
<td>Long-term systemic effects</td>
<td>4,167 mg/kg bw/day</td>
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<tr>
<td>triacetin</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Long-term systemic effects</td>
<td>35,275 mg/m³</td>
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<td></td>
<td>Environmental Compartment</td>
<td>Value</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------------</td>
<td>--------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethyl Acetoacetate</td>
<td>Fresh water</td>
<td>0,1 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Freshwater - intermittent</td>
<td>1 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0,01 mg/l</td>
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</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>300 mg/l</td>
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<tr>
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<td>Fresh water sediment</td>
<td>0,1465 mg/kg dry weight (d.w.)</td>
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<td></td>
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<tr>
<td></td>
<td>Marine sediment</td>
<td>0,0147 mg/kg dry weight (d.w.)</td>
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<tr>
<td></td>
<td>Soil</td>
<td>0,0501 mg/kg dry weight (d.w.)</td>
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<td>triacetin</td>
<td>Fresh water</td>
<td>1,88 mg/l</td>
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<td></td>
<td>Marine water</td>
<td>0,188 mg/l</td>
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<td></td>
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<tr>
<td></td>
<td>Intermittent use/release</td>
<td>1 mg/l</td>
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<td></td>
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<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>1088 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>4,73 mg/kg</td>
<td></td>
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<tr>
<td></td>
<td>Marine sediment</td>
<td>0,47 mg/kg</td>
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</tr>
<tr>
<td></td>
<td>Soil</td>
<td>0,57 mg/kg</td>
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<td>Oral (Secondary Poisoning)</td>
<td>69,9 mg/kg food</td>
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<tr>
<td>Propan-2-ol</td>
<td>Fresh water</td>
<td>140,9 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>140,9 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intermittent use/release</td>
<td>140,9 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sewage treatment plant</td>
<td>2251 mg/l</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>552 mg/kg dry weight (d.w.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>552 mg/kg dry weight (d.w.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>28 mg/kg dry weight (d.w.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oral (Secondary Poisoning)</td>
<td>160 mg/kg food</td>
<td></td>
<td></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

Material
Chemical-resistant gloves

Hand protection

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.

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

Appearance: liquid
Colour: White to light yellow
Odour: sweet
Odour Threshold: No data available
pH: No data available
Melting point/freezing point: No data available
Initial boiling point and boiling range: No data available
Flash point: 18 °C
Evaporation rate : No data available
Flammability (solid, gas) : Not applicable
Upper explosion limit / Upper flammability limit : No data available
Lower explosion limit / Lower flammability limit : No data available
Vapour pressure : No data available
Relative vapour density : No data available
Density : 1.12 g/cm³
Solubility(ies)
  Water solubility : No data available
  Partition coefficient: n-octanol/water : No data available
  Auto-ignition temperature : No data available
  Decomposition temperature : No data available
Viscosity
  Viscosity, kinematic : No data available
Explosive properties : Not explosive
Oxidizing properties : The substance or mixture is not classified as oxidizing.

9.2 Other information
  Flammability (liquids) : Not applicable
  Molecular weight : No data available
  Particle size : 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 : Highly 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 toxicological effects
Information on likely routes of exposure:
- Inhalation
- Skin contact
- Ingestion
- Eye contact

Acute toxicity
Harmful if swallowed.

Product:
- Acute oral toxicity: Acute toxicity estimate: 916.54 mg/kg
  Method: Calculation method

- Acute inhalation toxicity: Acute toxicity estimate: > 5 mg/l
  Exposure time: 4 h
  Test atmosphere: dust/mist
  Method: Calculation method

Components:

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

Indoxacarb (ISO):
- Acute oral toxicity: 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

- Acute inhalation toxicity: 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

Acute dermal toxicity : LD50 (Rat, male and female): > 5.000 mg/kg

**Skin corrosion/irritation**
Not classified based on available information.

**Components:**

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

**Indoxacarb (ISO):**
Result : No skin irritation

**Serious eye damage/eye irritation**
Causes serious eye irritation.

**Components:**

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

**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:**

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

**Indoxacarb (ISO):**
Test Type : Maximisation Test  Species : Guinea pig  Result : positive
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Germ cell mutagenicity
Not classified based on available information.

Components:

Propan-2-ol:
Genotoxicity in vitro
: Test Type: Bacterial reverse mutation assay (AMES)
  Result: negative

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

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

Genotoxicity in vitro
: Test Type: Chromosomal aberration
  Test system: mammalian cells
  Result: negative

Genotoxicity in vitro
: Test Type: In vitro mammalian cell gene mutation test
  Test system: Chinese hamster ovary cells
  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

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:**

**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

**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
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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:
Propan-2-ol:
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:
Propan-2-ol:
Species: Rat
NOAEL: 12.5 mg/l
Application Route: inhalation (vapour)
Exposure time: 104 Weeks

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
LOAEL: 23 mg/m3
Application Route: Inhalation
Exposure time: 4 Weeks
Target Organs : Blood, Lungs

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.

Experience with human exposure

Components:

Indoxacarb (ISO):
General Information : No human information is available.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Propan-2-ol:
Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)) : 9.640 mg/l
Exposure time : 96 h

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

Indoxacarb (ISO):
Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)) : 0.65 mg/l
Exposure time : 96 h
Method: OECD Test Guideline 203
10.2 Persistence and degradability

**Components:**

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

**12.3 Bioaccumulative potential**

**Components:**

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

**Indoxacarb (ISO):**
- Partition coefficient: n-octanol/water: log Pow: 4.65

**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 Other adverse effects

**Product:**
**Endocrine disrupting potential:** 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.

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

- **ADN:** UN 1219
- **ADR:** UN 1219
- **RID:** UN 1219
- **IMDG:** UN 1219
- **IATA:** UN 1219

14.2 UN proper shipping name

- **ADN:** ISOPROPA NOL, SOLUTION
- **ADR:** ISOPROPANOL, SOLUTION
- **RID:** ISOPROPANOL, SOLUTION
- **IMDG:** ISOPROPANOL, SOLUTION (Indoxacarb (ISO))
14.3 Transport hazard class(es)

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

14.4 Packing group

**ADN**
- Packing group: II
- Classification Code: F1
- Hazard Identification Number: 33
- Labels: 3

**ADR**
- Packing group: II
- Classification Code: F1
- Hazard Identification Number: 33
- Labels: 3
- Tunnel restriction code: (D/E)

**RID**
- Packing group: II
- Classification Code: F1
- Hazard Identification Number: 33
- Labels: 3

**IMDG**
- Packing group: II
- Labels: 3

**IATA (Cargo)**
- Packing instruction (cargo aircraft): 364
- Packing instruction (LQ): Y341
- Packing group: II
- Labels: Flammable Liquids

**IATA (Passenger)**
- Packing instruction (passenger aircraft): 353
- Packing instruction (LQ): Y341
- Packing group: II
- Labels: Flammable Liquids

14.5 Environmental hazards

**ADN**
- Environmentally hazardous: yes

**ADR**
- Environmentally hazardous: yes
SAFETY DATA SHEET

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Date of last issue: 09.04.2021
Date of first issue: 24.10.2014

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 Transport in bulk according to Annex II of Marpol and the IBC Code

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

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.
H301 : Toxic if swallowed.
H317 : May cause an allergic skin reaction.
H319 : Causes serious eye irritation.
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
Eye Irrit. : Eye irritation
Flam. Liq. : Flammable liquids
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Skin Sens. : Skin sensitisation
STOT RE : Specific target organ toxicity - repeated exposure
STOT SE : Specific target organ toxicity - single exposure
ZA OEL : South Africa. Hazardous Chemical Substances Regulations,
          Occupational Exposure Limits
ZA OEL / TWA OEL-RL : Long term occupational exposure limits - recommended limit
ZA OEL / STEL OEL-RL : Short term occupational exposure limits - recommended limit

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; AIIIC - 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 Observable (Adverse) Effect Concentration; NO(A)EL - No Observable (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>Flam. Liq.</th>
<th>Acute Tox.</th>
<th>Eye Irrit.</th>
<th>Skin Sens.</th>
<th>STOT SE</th>
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<tbody>
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<td>2</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>3</td>
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<tr>
<td>H225</td>
<td>H302</td>
<td>H319</td>
<td>H317</td>
<td>H336</td>
</tr>
</tbody>
</table>

Classification procedure:
Based on product data or assessment
Calculation method
Calculation method
Calculation method
Calculation method
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.