SAFETY DATA SHEET

Indoxacarb / Permethrin Formulation

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Indoxacarb / Permethrin Formulation

Manufacturer or supplier’s details
Company name of supplier : MSD
Address : 2000 Galloping Hill Road
           Kenilworth - New Jersey - U.S.A. 07033
Telephone : 908-740-4000
Emergency telephone : 1-908-423-6000
E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use
Recommended use : Veterinary product

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Flammable liquids : Category 3
Acute toxicity (Oral) : Category 4
Acute toxicity (Inhalation) : Category 4
Skin sensitization : Category 1
Specific target organ toxicity
- single exposure : Category 3
Specific target organ toxicity
- repeated exposure : Category 1 (Blood, Nervous system, Heart)

GHS label elements
Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H226 Flammable liquid and vapor.
                   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 (Blood, Nervous system, Heart) through prolonged or repeated exposure.

Precautionary Statements : Prevention:
                          P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
                          P260 Do not breathe mist or vapors.
                          P264 Wash skin thoroughly after handling.
                          P270 Do not eat, drink or smoke when using this product.
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Indoxacarb / Permethrin Formulation

Version 4.3  Revision Date: 27.08.2021  SDS Number: 27894-00016  Date of last issue: 17.03.2021  Date of first issue: 04.11.2014

P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
P314 Get medical advice/ attention if you feel unwell.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage:
P405 Store locked up.

Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

Vapors may form explosive mixture with air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permethrin (ISO)</td>
<td>52645-53-1</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
<tr>
<td>1-Methoxy-2-propanol</td>
<td>107-98-2</td>
<td>&gt;= 30 - &lt; 50</td>
</tr>
<tr>
<td>Indoxacarb (ISO)</td>
<td>173584-44-6</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
</tbody>
</table>

SECTION 4. 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.

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.
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.

Most important symptoms and effects, both acute and delayed:
- 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.

Protection of first-aiders:
- First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

Notes to physician:
- Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

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

Unsuitable extinguishing media:
- High volume water jet

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

Hazardous combustion products:
- Carbon oxides
- Chlorine compounds

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

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

SECTION 6. ACCIDENTAL RELEASE MEASURES

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

Environmental precautions:
- Avoid release to the environment.
- Prevent further leakage or spillage if safe to do so.
- Prevent spreading over a wide area (e.g., by containment or oil barriers).
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Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up:
- Non-sparking tools should be used.
- Soak up with inert absorbent material.
- Suppress (knock down) gases/vapors/mists with a water spray jet.
- For large spills, provide diking or other appropriate containment to keep material from spreading. If diked 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.

SECTION 7. HANDLING AND STORAGE

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

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

Advice on safe handling:
- Do not get on skin or clothing.
- Do not breathe mist or vapors.
- 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.

Conditions for safe storage:
- Keep in properly labeled 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.

Materials to avoid:
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

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<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>VLE-CT</td>
<td>150 ppm</td>
<td>NOM-010-STPS-2014</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>50 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>100 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Indoxacarb (ISO)</td>
<td>173584-44-6</td>
<td>TWA</td>
<td>20 µg/m³</td>
<td>Internal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wipe limit</td>
<td>100 µg/100 cm²</td>
<td>Internal</td>
</tr>
</tbody>
</table>

Further information:
- Skin sensitization

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

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 vapor type
  - Hand protection:
    - Material: Chemical-resistant gloves
    - Remarks: Choose gloves to protect hands against chemicals depending on the concentration 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.

Eye protection

Wear the following personal protective equipment:
Safety glasses

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).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
liquid

Color
Clear white to yellow.

Odor
ether-like

Odor 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
33.5 °C

Evaporation rate
No data available

Flammability (solid, gas)
Not applicable

Flammability (liquids)
No data available

Upper explosion limit / Upper flammability limit
No data available

Lower explosion limit / Lower flammability limit
No data available

Vapor pressure
No data available

Relative vapor density
No data available

Relative density
1.096
Density : No data available
Solubility(ies)
  Water solubility : No data available
Partition coefficient: n-octanol/water : Not applicable
Autoignition temperature : No data available
Decomposition temperature : No data available
Viscosity
  Viscosity, kinematic : No data available
Explosive properties : Not explosive
Oxidizing properties : The substance or mixture is not classified as oxidizing.
Molecular weight : No data available
Particle size : Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions
  Flammable liquid and vapor.
  Vapors may form explosive mixture with air.
  Can react with strong oxidizing agents.
Conditions to avoid : Heat, flames and sparks.
Incompatible materials : Oxidizing agents
Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

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: 572.63 mg/kg
  Method: Calculation method
Acute inhalation toxicity : Acute toxicity estimate: 3.29 mg/l
  Exposure time: 4 h
  Test atmosphere: dust/mist
Method: Calculation method

Components:

Permethrin (ISO):
Acute oral toxicity: LD50 (Rat): 480 - 554 mg/kg
Acute inhalation toxicity: LC50 (Rat): 2.3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Acute dermal toxicity: LD50 (Rabbit): > 2,000 mg/kg

1-Methoxy-2-propanol:
Acute oral toxicity: LD50 (Rat): 4,016 mg/kg
Acute inhalation toxicity: LC50 (Mouse): < 22.2 mg/l
Exposure time: 6 h
Test atmosphere: vapor
Acute dermal toxicity: LD50 (Rat): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

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 inhalation toxicity: LC50 (Rat, female): 4.2 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Acute dermal toxicity: LD50 (Rat, male and female): > 5,000 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 sensitization

Skin sensitization
May cause an allergic skin reaction.

Respiratory sensitization
Not classified based on available information.

Components:

Permethrin (ISO):
Test Type: Buehler Test
Routes of exposure: Skin contact
Species: Guinea pig
Result: positive
Assessment: Probability or evidence of skin sensitization in humans

1-Methoxy-2-propanol:
Test Type: Maximization Test
Routes of exposure: Skin contact
Species: Guinea pig
Result: negative

Indoxacarb (ISO):
Test Type: Maximization 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 - Assessment:
- Weight of evidence does not support classification as a germ cell mutagen.

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
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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 (vapor)
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 fetal 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 (vapor)  
Method: OECD Test Guideline 416  
Result: negative

Effects on fetal development: Test Type: Embryo-fetal development  
Species: Rat  
Application Route: inhalation (vapor)  
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 fetal 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

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 (Blood, Nervous system, Heart) 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
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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 (vapor)
Exposure time : 2 y
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
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 y
Target Organs : Blood

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

Species: Mouse
NOAEL: 3 mg/kg
LOAEL: 14 mg/kg

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

Ecotoxicity

Components:

Permethrin (ISO):

| Toxicity to fish | LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.00079 mg/l |
| Exposure time: 96 h |

| Toxicity to daphnia and other aquatic invertebrates | EC50 (Daphnia magna (Water flea)): 0.0001 mg/l |
| Exposure time: 48 h |

| Toxicity to algae/aquatic plants | ErC50 (Pseudokirchneriella subcapitata (green algae)): > 1.13 mg/l |
| Exposure time: 72 h |
| EC10 (Pseudokirchneriella subcapitata (green algae)): 0.0023 mg/l |
| Exposure time: 72 h |

| Toxicity to fish (Chronic toxicity) | NOEC (Danio rerio (zebra fish)): 0.00041 mg/l |
| Exposure time: 35 d |
| Method: OECD Test Guideline 210 |

| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | NOEC (Daphnia magna (Water flea)): 0.0047 µg/l |
| Exposure time: 21 d |
| Method: OECD Test Guideline 211 |

| Toxicity to microorganisms | EC50: > 1,000 mg/l |
| Exposure time: 3 h |

1-Methoxy-2-propanol:
**Toxicity to fish**
- LC50 (Leuciscus idus (Golden orfe)): 6,812 mg/l
  - Exposure time: 96 h
  - Method: DIN 38412

**Toxicity to daphnia and other aquatic invertebrates**
- EC50 (Daphnia magna (Water flea)): 23,300 mg/l
  - Exposure time: 48 h

**Toxicity to algae/aquatic plants**
- ErC50 (Skeletonema costatum (marine diatom)): 6,745 mg/l
  - Exposure time: 72 h
  - Method: ISO 10253

**Toxicity to microorganisms**
- IC50: > 1,000 mg/l
  - Exposure time: 3 h
  - Method: OECD Test Guideline 209

**Indoxacarb (ISO):**

**Toxicity to fish**
- LC50 (Oncorhynchus mykiss (rainbow trout)): 0.65 mg/l
  - Exposure time: 96 h
  - Method: OECD Test Guideline 203
  - 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

**Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)**
- NOEC (Daphnia magna (Water flea)): 0.09 mg/l
  - Exposure time: 21 d

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

Mobility in soil
Components:

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

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues: Dispose of in accordance with local regulations.
Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. 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

International Regulations

UNRTDG
UN number: UN 3092
Proper shipping name: 1-METHOXY-2-PROPANOL SOLUTION
Class: 3
Packing group: Iii
Labels: 3

IATA-DGR
UN/ID No.: UN 3092
Proper shipping name: 1-Methoxy-2-propanol solution
Class: 3
Packing group: III
Labels: Flammable Liquids
Packing instruction (cargo aircraft): 366
Packing instruction (passenger aircraft): 355

**IMDG-Code**

UN number: UN 3092
Proper shipping name: 1-METHOXY-2-PROPanol solution
(Permethrin (ISO), Indoxacarb (ISO))
Class: 3
Packing group: III
Labels: 3
EmS Code: F-E, S-D
Marine pollutant: yes

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**Domestic regulation**

**NOM-002-SCT**

UN number: UN 3092
Proper shipping name: 1-METHOXY-2-PROPanol, solution
Class: 3
Packing group: III
Labels: 3

**Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

**SECTION 15. REGULATORY INFORMATION**

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

Federal Law for the control of chemical precursors, essential chemical products and machinery for producing capsules, tablets and pills. Not applicable

**The ingredients of this product are reported in the following inventories:**

AICS: not determined

DSL: not determined

IECSC: not determined
SAFETY DATA SHEET

Indoxacarb / Permethrin Formulation

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SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NOM-010-STPS-2014 : Mexico. Norm NOM-010-STPS-2014 on Chemicals Polluting the Work Environment - Identification, Assessment and Control - Appendix 1 Occupational Exposure Limits
ACGIH / TWA : 8-hour, time-weighted average
ACGIH / STEL : Short-term exposure limit
NOM-010-STPS-2014 / VLE-PPT : Time weighted average limit value
NOM-010-STPS-2014 / VLE-CT : Short term exposure limit value

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Civil Aviation Organization; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; ICS0 - Half maximal inhibitory concentration; ICAO - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System


Revision Date : 27.08.2021
The information is considered as correct, but not exhaustive, and will be used only as a guide, which is based in the current knowledge of the substance or mixture, and is applicable to proper safety precautions for the product.

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