SAFETY DATA SHEET

Ivermectin Liquid Formulation

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Ivermectin Liquid Formulation

Manufacturer or supplier’s details
Company name of supplier: MSD
Address: Avenida 16 de Septiembre No. 301
Xaltocan - Xochimilco Mexico 16090
Telephone: 52 55 57284444
Telefax: 908-735-1496
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
Acute toxicity (Oral): Category 5
Skin irritation: Category 2
Eye irritation: Category 2A
Reproductive toxicity: Category 1B
Specific target organ toxicity - single exposure (Oral): Category 1 (Central nervous system)
Specific target organ toxicity - single exposure: Category 3
Specific target organ toxicity - repeated exposure (Oral): Category 1 (Central nervous system)

GHS label elements
Hazard pictograms: ![Danger Symbol]
Signal Word: Danger
Hazard Statements:
- H303 May be harmful if swallowed.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H360D May damage the unborn child.
- H370 Causes damage to organs (Central nervous system) if swallowed.
- H372 Causes damage to organs (Central nervous system) through prolonged or repeated exposure if swallowed.
Precautionary Statements:

**Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist or vapors.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**
P302 + P352 IF ON SKIN: Wash with plenty of 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.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.
P332 + P313 IF skin irritation occurs: Get medical advice/ attention.
P337 + P313 IF eye irritation persists: 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**
None known.

## 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>N-Methyl-2-pyrrolidone</td>
<td>872-50-4</td>
<td>&gt;= 10 - &lt; 20</td>
</tr>
<tr>
<td>Ivermectin</td>
<td>70288-86-7</td>
<td>&gt;= 1 - &lt; 5</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.
advice.

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

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

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

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
: May be harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
May damage the unborn child.
Causes damage to organs if swallowed.
Causes damage to organs through prolonged or repeated exposure if swallowed.

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
: None known.

Specific hazards during fire fighting
: Exposure to combustion products may be a hazard to health.

Hazardous combustion products
: Carbon oxides
Nitrogen oxides (NOx)

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
SAFETY DATA SHEET

Ivermectin Liquid Formulation

Personal precautions, protective equipment and emergency procedures:
Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

Environmental precautions:
Discharge into the environment must be avoided. 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.

Methods and materials for containment and cleaning up:
Soak up with inert absorbent material. 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.

Advice on safe handling:
Do not get on skin or clothing. Do not breathe vapors or spray mist. Do not swallow. Do not get in eyes. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment. Keep container tightly closed. Already sensitized individuals should consult their physician regarding working with respiratory irritants or sensitizers. 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. Wash contaminated clothing before re-use. The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.
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.

Materials to avoid: Do not store with the following product types:
Strong oxidizing agents
Organic peroxides
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>Ivermectin</td>
<td>70288-86-7</td>
<td>TWA</td>
<td>0.05 mg/m³ (OEB 3)</td>
<td>Internal</td>
</tr>
</tbody>
</table>

Further information: Skin
Wipe limit 0.5 mg/100 cm² Internal

Biological occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Methyl-2-pyrrolidone</td>
<td>872-50-4</td>
<td>5-Hydroxy-N-methyl-2-pyrrolidone</td>
<td>Urine</td>
<td>End of shift</td>
<td>100 mg/l</td>
<td>MX BEI</td>
</tr>
<tr>
<td>5-Hydroxy-N-methyl-2-pyrrolidone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ACGIH BEI</td>
</tr>
</tbody>
</table>

Engineering measures: Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less quick connections).
All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.
Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices).
Minimize open handling.

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.
Ivermectin Liquid Formulation

Filter type

Hand protection

Material

Remarks

Eye protection

Skin and body protection

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Color

Odor

Odor Threshold

pH

Melting point/freezing point

Initial boiling point and boiling range

Flash point

Evaporation rate

Flammability (solid, gas)

Flammability (liquids)

Upper explosion limit / Upper flammability limit

Lower explosion limit / Lower flammability limit

Vapor pressure

Relative vapor density
Relative density: No data available
Density: 0.90 - 0.92 g/cm³
Solubility(ies):
   Water solubility: insoluble
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.
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: Can react with strong oxidizing agents.
Conditions to avoid: None known.
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
May be harmful if swallowed.

Product:
Acute oral toxicity: Acute toxicity estimate: 4,463 mg/kg
   Method: Calculation method
Acute dermal toxicity: Acute toxicity estimate: > 5,000 mg/kg
   Method: Calculation method
COMPONENTS:

**N-Methyl-2-pyrrolidone:**

- Acute oral toxicity: LD50 (Rat): 4,150 mg/kg
- Acute inhalation toxicity: LC50 (Rat): > 5.1 mg/l
  - Exposure time: 4 h
  - Test atmosphere: dust/mist
  - Method: OECD Test Guideline 403
- Acute dermal toxicity: LD50 (Rat): > 5,000 mg/kg

**Ivermectin:**

- Acute oral toxicity: LD50 (Rat): 50 mg/kg
  - LD50 (Mouse): 25 mg/kg
  - LD50 (Monkey): > 24 mg/kg
  - Target Organs: Central nervous system
  - Symptoms: Vomiting, Dilatation of the pupil
  - Remarks: No mortality observed at this dose.
- Acute inhalation toxicity: LC50 (Rat): 5.11 mg/l
  - Exposure time: 1 h
  - Test atmosphere: dust/mist
- Acute dermal toxicity: LD50 (Rabbit): 406 mg/kg
  - LD50 (Rat): > 660 mg/kg

**Skin corrosion/irritation**

- Causes skin irritation.

COMPONENTS:

**N-Methyl-2-pyrrolidone:**

- Result: Skin irritation

**Ivermectin:**

- Species: Rabbit
- Result: No skin irritation

**Serious eye damage/eye irritation**

- Causes serious eye irritation.

COMPONENTS:

**N-Methyl-2-pyrrolidone:**

- Species: Rabbit
- Result: Irritation to eyes, reversing within 21 days
Ivermectin Liquid Formulation

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date</th>
<th>SDS Number</th>
<th>Date of last issue</th>
<th>Date of first issue</th>
</tr>
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<tr>
<td>5.0</td>
<td>23.03.2020</td>
<td>1204375-00010</td>
<td>13.09.2019</td>
<td>09.01.2017</td>
</tr>
</tbody>
</table>

### Ivermectin:
- **Species:** Rabbit
- Result: Mild eye irritation

### Respiratory or skin sensitization

#### Skin sensitization
- Not classified based on available information.

#### Respiratory sensitization
- Not classified based on available information.

### Components:

#### N-Methyl-2-pyrrolidone:
- **Test Type:** Local lymph node assay (LLNA)
- **Routes of exposure:** Skin contact
- **Species:** Mouse
- **Method:** OECD Test Guideline 429
- **Result:** negative
- **Remarks:** Based on data from similar materials

#### Ivermectin:
- **Routes of exposure:** Dermal
- **Species:** Humans
- Result: Does not cause skin sensitization.

### Germ cell mutagenicity
- Not classified based on available information.

### Components:

#### N-Methyl-2-pyrrolidone:
- **Genotoxicity in vitro:**
  - Test Type: Bacterial reverse mutation assay (AMES)
  - Method: OECD Test Guideline 471
  - Result: negative
  - Test Type: In vitro mammalian cell gene mutation test
  - Method: OECD Test Guideline 476
  - Result: negative
  - Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
  - Result: negative
- **Genotoxicity in vivo:**
  - Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
    - Species: Mouse
    - Application Route: Ingestion
    - Method: OECD Test Guideline 474
    - Result: negative
    - Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
Species: Hamster  
Application Route: Ingestion  
Method: OECD Test Guideline 475  
Result: negative

Ivermectin:

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

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

Test Type: Mouse Lymphoma  
Result: negative

Carcinogenicity
Not classified based on available information.

Components:

N-Methyl-2-pyrrolidone:

Species: Rat  
Application Route: Ingestion  
Exposure time: 2 Years  
Result: negative

Species: Rat  
Application Route: inhalation (vapor)  
Exposure time: 2 Years  
Result: negative

Ivermectin:

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

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

Reproductive toxicity
May damage the unborn child.

Components:

N-Methyl-2-pyrrolidone:

Effects on fertility:  
Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 416
Result: negative

Effects on fetal development:

Test Type: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: positive

Test Type: Fertility/early embryonic development
Species: Rat
Application Route: inhalation (vapor)
Result: positive

Test Type: Embryo-fetal development
Species: Rabbit
Application Route: Ingestion
Result: positive

Reproductive toxicity - Assessment:

Clear evidence of adverse effects on development, based on animal experiments.

Ivermectin:

Effects on fertility:

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

Effects on fetal development:

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

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

Test Type: Development
Species: Rabbit
Application Route: Oral
Result: Teratogenic effects., Embryotoxic effects and adverse effects on the offspring were detected only at high maternally toxic doses
## STOT-single exposure
**May cause respiratory irritation.**
Causes damage to organs (Central nervous system) if swallowed.

**Components:**

<table>
<thead>
<tr>
<th>N-Methyl-2-pyrrolidone:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assessment:</strong></td>
<td>May cause respiratory irritation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ivermectin:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target Organs:</strong></td>
<td>Central nervous system</td>
</tr>
<tr>
<td><strong>Assessment:</strong></td>
<td>Causes damage to organs.</td>
</tr>
</tbody>
</table>

## STOT-repeated exposure
Causes damage to organs (Central nervous system) through prolonged or repeated exposure if swallowed.

**Components:**

<table>
<thead>
<tr>
<th>Ivermectin:</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Target Organs:</strong></td>
<td>Central nervous system</td>
</tr>
<tr>
<td><strong>Assessment:</strong></td>
<td>Causes damage to organs through prolonged or repeated exposure.</td>
</tr>
</tbody>
</table>

## Repeated dose toxicity

**Components:**

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<thead>
<tr>
<th>N-Methyl-2-pyrrolidone:</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Species:</strong></td>
<td>Rat, male</td>
</tr>
<tr>
<td><strong>NOAEL:</strong></td>
<td>169 mg/kg</td>
</tr>
<tr>
<td><strong>LOAEL:</strong></td>
<td>433 mg/kg</td>
</tr>
<tr>
<td><strong>Application Route:</strong></td>
<td>Ingestion</td>
</tr>
<tr>
<td><strong>Exposure time:</strong></td>
<td>90 Days</td>
</tr>
<tr>
<td><strong>Method:</strong></td>
<td>OECD Test Guideline 408</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Species:</th>
<th>Rat</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NOAEL:</strong></td>
<td>0.5 mg/l</td>
</tr>
<tr>
<td><strong>LOAEL:</strong></td>
<td>1 mg/l</td>
</tr>
<tr>
<td><strong>Application Route:</strong></td>
<td>Inhalation (dust/mist/fume)</td>
</tr>
<tr>
<td><strong>Exposure time:</strong></td>
<td>96 Days</td>
</tr>
<tr>
<td><strong>Method:</strong></td>
<td>OECD Test Guideline 413</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Species:</th>
<th>Rabbit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NOAEL:</strong></td>
<td>826 mg/kg</td>
</tr>
<tr>
<td><strong>LOAEL:</strong></td>
<td>1,653 mg/kg</td>
</tr>
<tr>
<td><strong>Application Route:</strong></td>
<td>Skin contact</td>
</tr>
<tr>
<td><strong>Exposure time:</strong></td>
<td>20 Days</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ivermectin:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Species:</strong></td>
<td>Dog</td>
</tr>
<tr>
<td><strong>NOAEL:</strong></td>
<td>0.5 mg/kg</td>
</tr>
</tbody>
</table>
LOAEL: 1 mg/kg
Application Route: Oral
Exposure time: 14 Weeks
Target Organs: Central nervous system
Symptoms: Dilatation of the pupil, Tremors, Lack of coordination, anorexia

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

Species: Rat
NOAEL: 0.4 mg/kg
LOAEL: 0.8 mg/kg
Application Route: Oral
Exposure time: 3 Months
Target Organs: spleen, Bone marrow, Kidney

Aspiration toxicity
Not classified based on available information.

Experience with human exposure
Components:
N-Methyl-2-pyrrolidone:
Skin contact: Symptoms: Skin irritation
Ivermectin:
Skin contact: Remarks: Can be absorbed through skin.
Eye contact: Remarks: May irritate eyes.
Ingestion: Symptoms: Drowsiness, Dilatation of the pupil, Tremors, Vomiting, anorexia, Lack of coordination

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
Components:
N-Methyl-2-pyrrolidone:
Toxicity to fish: LC50 (Oncorhynchus mykiss (rainbow trout)): > 500 mg/l
Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 24 h
Method: DIN 38412
Toxicity to algae/aquatic plants: ErC50 (Desmodesmus subspicatus (green algae)): 600.5 mg/l
Exposure time: 72 h
EC10 (Desmodesmus subspicatus (green algae)): 92.6 mg/l
Exposure time: 72 h
### Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)
- **NOEC (Daphnia magna (Water flea))**: 12.5 mg/l
  - Exposure time: 21 d
  - Method: OECD Test Guideline 211

### Toxicity to microorganisms
- **EC50**: > 600 mg/l
  - Exposure time: 30 min
  - Method: ISO 8192

## Ivermectin

### Toxicity to fish
- **LC50 (Oncorhynchus mykiss (rainbow trout))**: 0.003 mg/l
  - Exposure time: 96 h
- **LC50 (Lepomis macrochirus (Bluegill sunfish))**: 0.0048 mg/l
  - Exposure time: 96 h

### Toxicity to daphnia and other aquatic invertebrates
- **EC50 (Daphnia magna (Water flea))**: 0.000025 mg/l
  - Exposure time: 48 h

### Toxicity to algae/aquatic plants
- **EC50 (Pseudokirchneriella subcapitata (green algae))**: > 9.1 mg/l
  - Exposure time: 72 h
  - Method: OECD Test Guideline 201
- **NOEC (Pseudokirchneriella subcapitata (green algae))**: 9.1 mg/l
  - Exposure time: 72 h
  - Method: OECD Test Guideline 201

### Persistence and degradability

#### Components:

#### N-Methyl-2-pyrrolidone

- **Biodegradability**: Result: Readily biodegradable.
  - Biodegradation: 73 %
  - Exposure time: 28 d
  - Method: OECD Test Guideline 301C

#### Ivermectin

- **Biodegradability**: Result: Not readily biodegradable.
  - Biodegradation: 50 %
  - Exposure time: 240 d

### Bioaccumulative potential

#### Components:

#### N-Methyl-2-pyrrolidone

- **Partition coefficient: n-octanol/water**: log Pow: -0.46
  - Method: OECD Test Guideline 107

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

Mobility in soil
No data available

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.
If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG
UN number  :  UN 3082
Proper shipping name  :  ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Ivermectin)
Class  :  9
Packing group  :  III
Labels  :  9

IATA-DGR
UN/ID No.  :  UN 3082
Proper shipping name  :  Environmentally hazardous substance, liquid, n.o.s. (Ivermectin)
Class  :  9
Packing group  :  III
Labels  :  Miscellaneous
Packing instruction (cargo aircraft)  :  964
Packing instruction (passenger aircraft)  :  964
Environmentally hazardous  :  yes

IMDG-Code
UN number  :  UN 3082
Proper shipping name  :  ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Ivermectin)
Class  :  9
Packing group  :  III
Labels  :  9
EmS Code  :  F-A, S-F
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 3082
- Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Ivermectin)
- Class: 9
- Packing group: III
- Labels: 9

**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

**SECTION 16. OTHER INFORMATION**

**Full text of other abbreviations**

- **ACGIH BEI**: ACGIH - Biological Exposure Indices (BEI)
- **MX BEI**: Official Mexican Norm NOM-047-SSA1-2011, Environmental Health - Biological exposure indices for workers occupationally exposed to chemical agents

AICS - Australian Inventory of Chemical Substances; ANTPT - 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 Air Transport Association; IBC - International Code for the Construction and
SAFETY DATA SHEET

Ivermectin Liquid Formulation

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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; 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; 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

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

Revision Date: 23.03.2020

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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.

MX / Z8