Section 1: Identification

Product name: Milbemycin Oxime / Lufenuron / Praziquantel Formulation

Manufacturer or supplier's details

Company: MSD
Address: 33 Whakatiki Street - Private Bag 908
Upper Hutt - New Zealand
Telephone: +1-908-740-4000
Emergency telephone number: +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: Hazard identification

GHS Classification

Skin sensitisation: Category 1
Reproductive toxicity: Category 1B
Specific target organ toxicity - repeated exposure (Oral): Category 2 (Central nervous system, Lungs, Liver, Stomach)

GHS label elements

Hazard pictograms:

Signal word: Danger

Hazard statements:
H317 May cause an allergic skin reaction.
H360D May damage the unborn child.
H373 May cause damage to organs (Central nervous system, Lungs, Liver, Stomach) 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 dust/ fume/ gas/ mist/ vapours/ spray.
P272 Contaminated work clothing should not be allowed out of
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the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P302 + P352 IF ON SKIN: Wash with plenty of water.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

Storage:
P405 Store locked up.

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

Other hazards which do not result in classification
Dust contact with the eyes can lead to mechanical irritation.
Contact with dust can cause mechanical irritation or drying of the skin.
May form explosive dust-air mixture during processing, handling or other means.

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>Starch</td>
<td>9005-25-8</td>
<td>&gt;= 30 &lt; 60</td>
</tr>
<tr>
<td>Glycerine</td>
<td>56-81-5</td>
<td>&gt;= 10 &lt; 30</td>
</tr>
<tr>
<td>lufenuron (ISO)</td>
<td>103055-07-8</td>
<td>&gt;= 1 &lt; 10</td>
</tr>
<tr>
<td>Sucrose</td>
<td>57-50-1</td>
<td>&lt; 10</td>
</tr>
<tr>
<td>Savorysel Bacon Flavor</td>
<td>Not Assigned</td>
<td>&lt; 10</td>
</tr>
<tr>
<td>praziquantel</td>
<td>55268-74-1</td>
<td>&lt; 10</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.
Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with soap and 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 : If in eyes, rinse well with water.
Get medical attention if irritation develops and persists.
### If swallowed

- **If swallowed, DO NOT induce vomiting.**
  - Get medical attention.
  - Rinse mouth thoroughly with water.

### Most important symptoms and effects, both acute and delayed

- **May cause an allergic skin reaction.**
- **May damage the unborn child.**
- **May cause damage to organs through prolonged or repeated exposure if swallowed.**
- **Contact with dust can cause mechanical irritation or drying of the skin.**
- **Dust contact with the eyes can lead to mechanical irritation.**

### 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)
- Metal 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 firefighters

- 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

- 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.
- 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

- Sweep up or vacuum up spillage and collect in suitable container for disposal.
Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. 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**
- Static electricity may accumulate and ignite suspended dust causing an explosion.
- Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

**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 dust, fume, gas, mist, vapours or spray.
- 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.
- Keep container tightly closed.
- Minimize dust generation and accumulation.
- Keep container closed when not in use.
- Keep away from heat and sources of ignition.
- 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.
- 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 labelled containers.
- Store locked up.
- Keep tightly closed.
- Store in accordance with the particular national regulations.

**Materials to avoid**
- Do not store with the following product types:
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Strong oxidizing agents

Section 8: Exposure controls/personal protection

Components 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>Starch</td>
<td>9005-25-8</td>
<td>WES-TWA</td>
<td>10 mg/m³</td>
<td>NZ OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Glycerine</td>
<td>56-81-5</td>
<td>WES-TWA (Mist)</td>
<td>10 mg/m³</td>
<td>NZ OEL</td>
</tr>
<tr>
<td>Lufenuron (ISO)</td>
<td>103055-07-8</td>
<td>TWA</td>
<td>OEB 3 (&gt;= 10 &lt; 100 µg/m³)</td>
<td>Internal</td>
</tr>
<tr>
<td>Sucrose</td>
<td>57-50-1</td>
<td>WES-TWA</td>
<td>10 mg/m³</td>
<td>NZ OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Savorysel Bacon Flavor</td>
<td>Not Assigned</td>
<td>Wipe limit</td>
<td>OEB 2 (&gt;= 100 &lt; 1000 µg/m³)</td>
<td>Internal</td>
</tr>
<tr>
<td>Praziquantel</td>
<td>55268-74-1</td>
<td>TWA</td>
<td>0.5 mg/m³ (OEB 2)</td>
<td>Internal</td>
</tr>
</tbody>
</table>

Engineering measures: 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.

Filter type: Combined particulates and organic vapour type

Hand protection

Material: Chemical-resistant gloves

Remarks: Consider double gloving.

Eye protection

Wear safety glasses with side shields or goggles.

If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.

Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

Skin and body protection

Work uniform or laboratory coat.

Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces.

Use appropriate degowning techniques to remove potentially...
### Section 9: Physical and chemical properties

- **Appearance**: solid
- **Colour**: brown
- **Odour**: characteristic
- **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**: Not applicable
- **Evaporation rate**: Not applicable
- **Flammability (solid, gas)**: May form explosive dust-air mixture during processing, handling or other means.
- **Flammability (liquids)**: Not applicable
- **Upper explosion limit / Upper flammability limit**: No data available
- **Lower explosion limit / Lower flammability limit**: No data available
- **Vapour pressure**: Not applicable
- **Relative vapour density**: Not applicable
- **Relative density**: No data available
- **Density**: No data available
- **Solubility(ies)**
  - **Water solubility**: soluble
- **Partition coefficient: n-octanol/water**: Not applicable
- **Auto-ignition temperature**: No data available
- **Decomposition temperature**: No data available
- **Viscosity**
  - **Viscosity, kinematic**: Not applicable
Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Molecular weight : No data available

Particle size : No data available

### Section 10: Stability and reactivity

**Reactivity** : Not classified as a reactivity hazard.

**Chemical stability** : Stable under normal conditions.

**Possibility of hazardous reactions** : May form explosive dust-air mixture during processing, handling or other means.

Can react with strong oxidizing agents.

**Conditions to avoid** : Heat, flames and sparks.

Avoid dust formation.

**Incompatible materials** : Oxidizing agents

**Hazardous decomposition products** : No hazardous decomposition products are known.

### Section 11: Toxicological information

**Exposure routes** :

- Inhalation
- Skin contact
- Ingestion
- Eye contact

**Acute toxicity**

Not classified based on available information.

**Components**:

**Starch**:

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

**Glycerine**:

- Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
- Acute dermal toxicity : LD50 (Guinea pig): > 5,000 mg/kg

**Lufenuron (ISO)**:

- Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
- LD50 (Mouse): > 2,000 mg/kg
- Acute inhalation toxicity : LC50 (Rat): 2,350 mg/m3

Test atmosphere: dust/mist
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<tr>
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<th>Revision Date</th>
<th>SDS Number</th>
<th>Date of last issue</th>
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<tr>
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</tr>
</tbody>
</table>

### Acute Dermal Toxicity
- **LD50 (Rabbit):** > 2,000 mg/kg

### Acute Oral Toxicity
- **Sucrose:**
  - **LD50 (Rat):** 29,700 mg/kg

- **Savorysel Bacon Flavor:**
  - **Remarks:** Based on available data, the classification criteria are not met.

### Acute Inhalation Toxicity
- **Remarks:** Not classified due to lack of data.

### Acute Dermal Toxicity
- **Remarks:** Based on available data, the classification criteria are not met.

### Praziquantel
- **Acute Oral Toxicity**
  - **LD50 (Rat):** 2,480 mg/kg
  - **LD50 (Mouse):** 2,454 mg/kg
  - **LD50 (Dog):** > 200 mg/kg
  - **LD50 (Rabbit):** 1,050 mg/kg

### Skin Corrosion/Irritation
Not classified based on available information.

### Components

#### Glycerine:
- **Species:** Rabbit
- **Result:** No skin irritation

#### Lufenuron (ISO):
- **Species:** Rabbit
- **Method:** Draize Test
- **Result:** No skin irritation

#### Savorysel Bacon Flavor:
- **Remarks:** Based on data from similar materials
  - May irritate skin.

#### Praziquantel:
- **Species:** Rabbit
- **Method:** Draize Test
- **Remarks:** Slight irritation
Serious eye damage/eye irritation
Not classified based on available information.

Components:

Starch:
Species: Rabbit
Result: No eye irritation

Glycerine:
Species: Rabbit
Result: No eye irritation

Lufenuron (ISO):
Species: Rabbit
Result: No eye irritation
Method: Draize Test

Savorysel Bacon Flavor:
Remarks: Based on data from similar materials
         May irritate eyes.

Praziquantel:
Species: Rabbit
Result: Mild eye irritation
Method: Draize Test

Respiratory or skin sensitisation
Skin sensitisation
May cause an allergic skin reaction.
Respiratory sensitisation
Not classified based on available information.

Components:

Starch:
Test Type: Maximisation Test
Exposure routes: Skin contact
Species: Guinea pig
Result: negative

Lufenuron (ISO):
Test Type: Maximisation Test
Species: Guinea pig
Assessment: May cause sensitisation by skin contact.
Result: Sensitiser
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Savorysel Bacon Flavor:
Remarks: Not classified due to lack of data.

praziquantel:
Test Type: Maximisation Test
Exposure routes: Dermal
Species: Guinea pig
Result: Not a skin sensitizer.

Chronic toxicity
Germ cell mutagenicity
Not classified based on available information.

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

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

lufenuron (ISO):
Genotoxicity in vitro: Test Type: Ames test
Result: negative

Test Type: Mouse Lymphoma
Test system: Chinese hamster cells
Result: negative

Test Type: Cytogenetic assay
Test system: Chinese hamster ovary cells
Result: negative

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Test system: rat hepatocytes
Result: negative
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Test system: Human lymphocytes
Result: negative

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

Test Type: Unscheduled DNA synthesis test (UDS) in testicular cells
Species: Rat
Result: negative

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

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

Savorysel Bacon Flavor:
Genotoxicity in vitro:
Remarks: Not classified due to lack of data.

Genotoxicity in vivo:
Remarks: Not classified due to lack of data.

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

Test Type: Chromosomal aberration
Test system: Chinese hamster cells
Result: negative

Genotoxicity in vivo:
Test Type: Micronucleus test
Species: Rat
Result: negative

Carcinogenicity:
Not classified based on available information.

Components:

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

Lufenuron (ISO):
Species: Rat
Application Route: Ingestion
Exposure time: 18 month(s)
Result: negative

Carcinogenicity - Assessment: Weight of evidence does not support classification as a carcinogen

**praziquantel:**
Species: Hamster
Application Route: Oral
Exposure time: 80 weeks
NOAEL: 100 mg/kg body weight
Result: negative
Remarks: No significant adverse effects were reported

Species: Rat
Application Route: Oral
Exposure time: 104 weeks
NOAEL: 250 mg/kg body weight
Result: negative
Remarks: No significant adverse effects were reported

**Reproductive toxicity**
May damage the unborn child.

**Components:**

**Glycerine:**
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

**lufenuron (ISO):**
Effects on fertility: Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Oral
General Toxicity - Parent: NOAEL: 8.3 mg/kg wet weight
Early Embryonic Development: NOAEL: 20.9 mg/kg body weight
Result: Animal testing did not show any effects on fertility.

Effects on foetal development: Test Type: Development
Species: Rat
Application Route: Oral
General Toxicity Maternal: NOAEL: 500 mg/kg body weight
Developmental Toxicity: NOAEL: 1,000 mg/kg body weight
## Symptoms:
No adverse effects

## Remarks:
No significant adverse effects were reported

## Test Type:
Fertility/early embryonic development

## Species:
Rat

## Application Route:
Ingestion

## General Toxicity Maternal:
NOAEL: 20.9 mg/kg body weight

## Embryo-foetal toxicity:
8.3 mg/kg body weight

## Result:
foetal abnormalities

## Reproductive toxicity - Assessment:
Clear evidence of adverse effects on development, based on animal experiments.

### Savorysel Bacon Flavor:

#### Effects on fertility
Remarks: No data available

#### Effects on foetal development
Remarks: No data available

### praziquantel:

#### Effects on fertility
Remarks: No significant adverse effects were reported

#### Effects on foetal development
Remarks: No significant adverse effects were reported

### STOT - single exposure
Not classified based on available information.

### Components:

#### lufenuron (ISO):

#### Assessment
The substance or mixture is not classified as specific target organ toxicant, single exposure.

### STOT - repeated exposure
May cause damage to organs (Central nervous system, Lungs, Liver, Stomach) through prolonged or repeated exposure if swallowed.

### Components:

#### lufenuron (ISO):

#### Exposure routes
Oral
Target Organs: Central nervous system, Lungs, Liver, Stomach
Assessment: Shown to produce significant health effects in animals at concentrations of 10 mg/kg bw or less.

Repeated dose toxicity

Components:

Starch:
Species: Rat
NOAEL: >= 2,000 mg/kg
Application Route: Skin contact
Exposure time: 28 Days
Method: OECD Test Guideline 410

Glycerine:
Species: Rat
NOAEL: 0.167 mg/l
LOAEL: 0.622 mg/l
Application Route: inhalation (dust/mist/fume)
Exposure time: 13 Weeks
Species: Rat
NOAEL: 8,000 - 10,000 mg/kg
Application Route: Ingestion
Exposure time: 2 yr
Species: Rabbit
NOAEL: 5,040 mg/kg
Application Route: Skin contact
Exposure time: 45 Weeks

Lufenuron (ISO):
Species: Rat
NOAEL: 5.34 mg/kg
Application Route: oral (feed)
Exposure time: 4 Months
Target Organs: Central nervous system, digestive system
Symptoms: central nervous system effects
Species: Rat
NOAEL: 1.93 mg/kg
Application Route: oral (feed)
Exposure time: 2 yr
Symptoms: central nervous system effects, Convulsions
Species: Mouse
NOAEL: 2.12 mg/kg
Application Route: oral (feed)
Exposure time: 18 Months
Target Organs: Central nervous system, Liver, Prostate
Symptoms: central nervous system effects, Convulsions
Species: Dog
NOAEL: 7.02 mg/kg
Application Route: Oral (feed)
Exposure time: 1 yr
Target Organs: Central nervous system, Liver, Lungs
Symptoms: Convulsions, Fatality, Irregularities

Savorysel Bacon Flavor:
Remarks: Not classified due to lack of data.

praziquantel:
Species: Rat
NOAEL: 1,000 mg/kg
Application Route: Oral
Remarks: No significant adverse effects were reported

Species: Dog
NOAEL: 60 mg/kg
LOAEL: 180 mg/kg
Application Route: Oral
Target Organs: Gastrointestinal tract
Remarks: No significant adverse effects were reported

Aspiration toxicity
Not classified based on available information.

Experience with human exposure

Components:
lufenuron (ISO):
General Information: Remarks: May be harmful if swallowed. May cause neurotoxic effects.

Savorysel Bacon Flavor:
General Information: Remarks: Based on data from similar materials. May irritate skin. May irritate eyes.

praziquantel:
Inhalation: Symptoms: Headache, Tiredness, Dizziness, Gastrointestinal discomfort, decrease body temperature, Allergic reactions

Further information

Components:
Savorysel Bacon Flavor:
Remarks: No toxicology information is available.
Section 12: Ecological information

Ecotoxicity

**Components:**

**Glycerine:**
- Toxicity to fish: LC50 (Oncorhynchus mykiss (rainbow trout)): 54,000 mg/l Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 1,955 mg/l Exposure time: 48 h
- Toxicity to microorganisms: NOEC (Pseudomonas putida): > 10,000 mg/l Exposure time: 16 h Method: DIN 38 412 Part 8

**Lufenuron (ISO):**
- Toxicity to fish: LC50 (Oncorhynchus mykiss (rainbow trout)): > 73,100 µg/l Exposure time: 96 h Method: OECD Test Guideline 203
  
  LC50 (Oncorhynchus mykiss (rainbow trout)): > 29,000 µg/l Exposure time: 96 h Method: OECD Test Guideline 203
  
  LC50 (Oncorhynchus mykiss (rainbow trout)): 370 µg/l Exposure time: 96 h Method: OECD Test Guideline 203

- Toxicity to daphnia and other aquatic invertebrates: EC50 (Americamysis): 0.042 µg/l Exposure time: 96 h Method: US-EPA OPPTS 850.1035

- Toxicity to algae/aquatic plants: EC50 (Raphidocelis subcapitata (freshwater green alga)): 209 µg/l Exposure time: 72 h Method: OECD Test Guideline 201
  
  EC50 (Scenedesmus subspicatus): 17 µg/l Exposure time: 72 h Method: OECD Test Guideline 201

- Toxicity to fish (Chronic toxicity): NOEC (Oncorhynchus mykiss (rainbow trout)): 80 µg/l Exposure time: 33 d Method: OECD Test Guideline 210
  
  NOEC (Oncorhynchus mykiss (rainbow trout)): 20 µg/l Exposure time: 359 d Method: OECD Test Guideline 229

- Toxicity to daphnia and other aquatic invertebrates: NOEC (Daphnia magna (Water flea)): 8.38 µg/l
aquatic invertebrates (Chronic toxicity)  
Exposure time: 21 d  
Method: OECD Test Guideline 211  
NOEC (Daphnia magna (Water flea)): 90 µg/l  
Exposure time: 21 d  
Method: OECD Test Guideline 211  
NOEC (Chironomus riparius (harlequin fly)): 2 µg/l  
Exposure time: 21 d  
Method: OECD Test Guideline 211

**praziquantel:**
Toxicity to fish  
LC50 (Carassius auratus (goldfish)): 29.2 mg/l  
Exposure time: 96 hrs  
Method: OECD Test Guideline 203  
LC50 (Danio rerio (zebra fish)): 31.6 mg/l  
Exposure time: 96 hrs  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates  
EC50 (Daphnia magna (Water flea)): 35 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to microorganisms  
EC50 (activated sludge): > 1,000 mg/l  
Exposure time: 3 h  
Test Type: Respiration inhibition of activated sludge  
Method: OECD Test Guideline 209

**Persistence and degradability**

**Components:**

**Glycerine:**
Biodegradability  
Result: Readily biodegradable.  
Biodegradation: 92 %  
Exposure time: 30 d  
Method: OECD Test Guideline 301D

**Bioaccumulative potential**

**Components:**

**Glycerine:**
Partition coefficient: n-octanol/water  
log Pow: -1.75

**lufenuron (ISO):**
Bioaccumulation  
Species: Lepomis macrochirus (Bluegill sunfish)  
Bioconcentration factor (BCF): 28  
Method: OECD Test Guideline 305

Partition coefficient: n-  
log Pow: 5.12
octanol/water
Sucrose:
Partition coefficient: n-octanol/water : Pow: < 1
praziquantel:
Partition coefficient: n-octanol/water : log Pow: 2.012
pH: 7

Mobility in soil
Components:
lufenuron (ISO):
Distribution among environmental compartments : log Koc: 5.38
Method: OECD Test Guideline 106

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 3077
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
(Milbemycin Oxime, lufenuron (ISO))
Class : 9
Packing group : III
Labels : 9

IATA-DGR
UN/ID No. : UN 3077
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.
(Milbemycin Oxime, lufenuron (ISO))
Class : 9
Packing group : III
Labels : Miscellaneous
Packing instruction (cargo aircraft) : 956
Packing instruction (passenger aircraft) : 956
SAFETY DATA SHEET
Milbemycin Oxime / Lufenuron / Praziquantel Formulation

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Environmentally hazardous: yes

IMDG-Code
UN number: UN 3077
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Milbemycin Oxime, lufenuron (ISO))
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.

National Regulations

NZS 5433
UN number: UN 3077
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Milbemycin Oxime, lufenuron (ISO))
Class: 9
Packing group: III
Labels: 9
Hazchem Code: 2Z

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

HSNO Approval Number
HSR100759 Veterinary Medicines Non dispersive Open System Application Group Standard 2017

HSW Controls
Certified handler certificate not required.
Tracking hazardous substance not required.
Refer to the Health and Safety at Work (Hazardous Substances) Regulations 2017, for further information.

The components of this product are reported in the following inventories:
AICS: not determined
DSL: not determined
SAFETY DATA SHEET

Milbemycin Oxime / Lufenuron / Praziquantel
Formulation

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Revision Date: 27.08.2021
SDS Number: 7567915-00004
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IECSC : not determined

Section 16: Other information

Further information

Date format: dd.mm.yyyy

Full text of other abbreviations
ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NZ OEL : New Zealand. Workplace Exposure Standards for Atmospheric Contaminants

ACGIH / TWA : 8-hour, time-weighted average
NZ OEL / WES-TWA : Workplace Exposure Standard - Time Weighted average

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.

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