SECTION 1. IDENTIFICATION

Product name: Oxfendazole Formulation
Other means of identification: No data available

Manufacturer or supplier's details
Company name of supplier: Merck & Co., Inc
Address: 126 E. Lincoln Avenue
Rahway, New Jersey U.S.A. 07065
Telephone: 908-740-4000
Emergency telephone: 1-908-423-6000
E-mail address: EHSDATASTEWARD@merck.com

Recommended use of the chemical and restrictions on use
Recommended use: Veterinary product
Restrictions on use: Not applicable

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations
Combustible dust: Category 1
Reproductive toxicity: Category 1B
Specific target organ toxicity - repeated exposure: Category 2 (Liver, Testis)

GHS label elements
Hazard pictograms:

Signal Word: Danger

Hazard Statements:
- May form combustible dust concentrations in air.
- H360FD May damage fertility. May damage the unborn child.
- H373 May cause damage to organs (Liver, Testis) through prolonged or repeated exposure.

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.
  P280 Wear protective gloves, protective clothing, eye protection and face protection.
- Response:
  P308 + P313 IF exposed or concerned: Get medical attention.
Storage:
P405 Store locked up.

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

Other hazards
Dust contact with the eyes can lead to mechanical irritation.
Contact with dust can cause mechanical irritation or drying of the skin.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance / Mixture</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>oxfendazole</td>
<td>No data available</td>
</tr>
<tr>
<td>Cellulose</td>
<td>No data available</td>
</tr>
<tr>
<td>Aluminum, 2-(1,3-dihydro-3-oxo-5-sulfo-2H-indol-2-ylidene)-2,3-dihydro-3-oxo-1H-indole-5-sulfonic acid complex</td>
<td>C.I. Pigment Blue 63</td>
</tr>
<tr>
<td>Magnesium stearate</td>
<td>Octadecanoic acid, magnesium salt (2:1)</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 damage fertility. May damage the unborn child. May cause damage to organs through prolonged or repeated exposure. 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: High volume water jet

Specific hazards during fire fighting: Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Do not use a solid water stream as it may scatter and spread fire. Exposure to combustion products may be a hazard to health.

Hazardous combustion products: Carbon oxides
Metal oxides
Nitrogen oxides (NOx)
Sulfur oxides

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: 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.
Do not swallow.
Avoid contact with eyes.
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.
Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage : Keep in properly labeled 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:
Strong oxidizing agents
Self-reactive substances and mixtures
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>
</table>

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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: Particulates 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 contaminated clothing.

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: powder

Color: No data available

Odor: No data available

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: Not applicable

Evaporation rate: Not applicable

Flammability (solid, gas): May form explosive dust-air mixture.

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: Not applicable

Relative vapor density: Not applicable
 Relative density : No data available
 Density : No data available
 Solubility(ies) : No data available
 Water solubility : No data available
 Partition coefficient: n-octanol/water : Not applicable
 Autoignition temperature : No data available
 Decomposition temperature : No data available
 Viscosity : Not applicable
 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,
 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

Information on likely routes of exposure

Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity
Not classified based on available information.

Components:
oxendazole:
SAFETY DATA SHEET
according to the Hazardous Products Regulations

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Acute oral toxicity: LD50 (Rat): > 6,000 mg/kg
LD50 (Dog): 1,600 mg/kg
LD50 (sheep): 250 mg/kg

Cellulose:
Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity: LC50 (Rat): > 5.8 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Acute dermal toxicity: LD50 (Rabbit): > 2,000 mg/kg

Aluminum, 2-(1,3-dihydro-3-oxo-5-sulfo-2H-indol-2-ylidene)-2,3-dihydro-3-oxo-1H-indole-5-sulfonic acid complex:
Acute oral toxicity: LD50 (Rat): > 2,000 mg/kg
Remarks: Based on data from similar materials
Acute dermal toxicity: LD50 (Rabbit): > 2,500 mg/kg
Remarks: Based on data from similar materials

Magnesium stearate:
Acute oral toxicity: LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity
Remarks: Based on data from similar materials
Acute dermal toxicity: LD50 (Rabbit): > 2,000 mg/kg
Remarks: Based on data from similar materials

Skin corrosion/irritation
Not classified based on available information.

Components:

oxfendazole:
Species: Rabbit
Result: No skin irritation

Magnesium stearate:
Species: Rabbit
Result: No skin irritation
Remarks: Based on data from similar materials

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

**oxfendazole:**
- Species: Rabbit
- Result: No eye irritation

**Magnesium stearate:**
- Species: Rabbit
- Result: No eye irritation
- Remarks: Based on data from similar materials

Respiratory or skin sensitization

**Skin sensitization**
Not classified based on available information.

**Respiratory sensitization**
Not classified based on available information.

Components:

**Aluminum, 2-(1,3-dihydro-3-oxo-5-sulfo-2H-indol-2-ylidene)-2,3-dihydro-3-oxo-1H-indole-5-sulfonic acid complex:**
- Test Type: Maximization Test
- Routes of exposure: Skin contact
- Species: Guinea pig
- Method: OECD Test Guideline 406
- Result: negative
- Remarks: Based on data from similar materials

**Magnesium stearate:**
- Test Type: Maximization Test
- Routes of exposure: Skin contact
- Species: Guinea pig
- Method: OECD Test Guideline 406
- Result: negative
- Remarks: Based on data from similar materials

**Germ cell mutagenicity**
Not classified based on available information.

Components:

**oxfendazole:**
- Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES)
  - Result: negative
- Genotoxicity in vivo: Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
  - Species: Mouse
  - Application Route: Oral
  - Result: positive
SAFETY DATA SHEET
according to the Hazardous Products Regulations

Oxfendazole Formulation

Cellulose:

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

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

Aluminum, 2-(1,3-dihydro-3-oxo-5-sulfo-2H-indol-2-ylidene)-2,3-dihydro-3-oxo-1H-indole-5-sulfonic acid complex:

Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vitro: Test Type: Chromosome aberration test in vitro
Result: equivocal
Remarks: Based on data from similar materials

Genotoxicity in vivo: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on data from similar materials

Magnesium stearate:

Genotoxicity in vitro: Test Type: In vitro mammalian cell gene mutation test
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vitro: Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: Based on data from similar materials

Carcinogenicity
Not classified based on available information.
Components:

oxfendazole:

- **Species**: Rat
- **Application Route**: Oral
- **Exposure time**: 1 Years
- **Symptoms**: No adverse effects.
- **Target Organs**: Liver

- **Species**: Rat
- **Application Route**: Oral
- **Exposure time**: 2 Years
- **Symptoms**: No adverse effects.
- **Target Organs**: Liver

Cellulose:

- **Species**: Rat
- **Application Route**: Ingestion
- **Exposure time**: 72 weeks
- **Result**: negative

**Aluminum, 2-(1,3-dihydro-3-oxo-5-sulfo-2H-indol-2-ylidene)-2,3-dihydro-3-oxo-1H-indole-5-sulfonic acid complex**:

- **Species**: Rat
- **Application Route**: Ingestion
- **Exposure time**: 2 Years
- **Result**: negative
- **Remarks**: Based on data from similar materials

Reproductive toxicity

May damage fertility. May damage the unborn child.

Components:

oxfendazole:

- **Effects on fertility**: Test Type: Fertility/early embryonic development
  - **Species**: Rat, male
  - **Application Route**: Oral
  - **Fertility**: NOAEL: 17 mg/kg body weight
  - **Target Organs**: Testes
  - **Result**: Effects on fertility.

- **Test Type**: Two-generation reproduction toxicity study
  - **Species**: Rat
  - **Application Route**: Oral
  - **Fertility**: NOAEL: 0.9 mg/kg body weight
  - **Target Organs**: Liver
  - **Result**: No effects on fertility.

- **Test Type**: Fertility
  - **Species**: Mouse
  - **Application Route**: Oral
Oxfendazole Formulation

<table>
<thead>
<tr>
<th>Duration of Single Treatment</th>
<th>1 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fertility: NOAEL</td>
<td>750 mg/kg body weight</td>
</tr>
<tr>
<td>Target Organs:</td>
<td>Testes</td>
</tr>
<tr>
<td>Result:</td>
<td>Effects on fertility.</td>
</tr>
</tbody>
</table>

### Effects on fetal development

- **Species:** Rat
- **Application Route:** Oral
- **Developmental Toxicity:** NOAEL: 10 mg/kg body weight
- **Result:** positive, Fetal effects.

- **Species:** Rat
- **Developmental Toxicity:** NOAEL: 10 mg/kg body weight
- **Result:** positive, Embryo-fetal toxicity.

- **Species:** Mouse
- **Application Route:** Oral
- **Developmental Toxicity:** NOAEL: 108 mg/kg body weight
- **Result:** positive, Embryo-fetal toxicity, Fetal abnormalities.

- **Species:** Rabbit
- **Application Route:** Oral
- **Developmental Toxicity:** NOAEL: 0.625 mg/kg body weight

### Reproductive toxicity - Assessment

- **Test Type:** One-generation reproduction toxicity study
- **Species:** Rat
- **Application Route:** Ingestion
- **Result:** negative

- **Test Type:** Fertility/early embryonic development
- **Species:** Rat
- **Application Route:** Ingestion
- **Result:** negative

### Cellulose:

- **Test Type:** Three-generation reproduction toxicity study
- **Species:** Rat
- **Application Route:** Ingestion
- **Result:** negative
- **Remarks:** Based on data from similar materials

### Aluminum, 2-(1,3-dihydro-3-oxo-5-sulfo-2H-indol-2-ylidene)-2,3-dihydro-3-oxo-1H-indole-5-sulfonic acid complex:

- **Test Type:** Embryo-fetal development

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Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Magnesium stearate:
Effects on fertility:
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development:
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

STOT-single exposure
Not classified based on available information.

STOT-repeated exposure
May cause damage to organs (Liver, Testis) through prolonged or repeated exposure.

Components:
oxifendazole:
Routes of exposure: Oral
Target Organs: Liver, Testis
Assessment: May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:
oxifendazole:
Species: Rat
NOAEL: 11 mg/kg
Application Route: Oral
Exposure time: 2 Weeks
Target Organs: Blood, Liver, Testis

Species: Rat
NOAEL: 3.8 mg/kg
Application Route: Oral
Exposure time: 3 Months
Target Organs: Liver, Testis

Species: Mouse
NOAEL: 750 mg/kg
Oxfendazole Formulation

<table>
<thead>
<tr>
<th>Application Route</th>
<th>Oral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>1 Months</td>
</tr>
<tr>
<td>Target Organs</td>
<td>Liver</td>
</tr>
</tbody>
</table>

| Species | Mouse |
| NOAEL   | 37.5 mg/kg |
| Application Route | Oral |
| Exposure time     | 3 Months |
| Target Organs     | Liver |

| Species | Dog |
| NOAEL   | 6 mg/kg |
| Application Route | Oral |
| Exposure time     | 1 Months |
| Remarks           | No significant adverse effects were reported |

| Species | Dog |
| NOAEL   | 11 mg/kg |
| Application Route | Oral |
| Exposure time     | 2 Weeks |
| Target Organs     | Lymph nodes, thymus gland |

| Species | Dog |
| NOAEL   | 13.5 mg/kg |
| Application Route | Oral |
| Exposure time     | 12 Months |
| Target Organs     | Liver |

### Cellulose:

| Species | Rat |
| NOAEL   | >= 9,000 mg/kg |
| Application Route | Ingestion |
| Exposure time     | 90 Days |

### Aluminum, 2-(1,3-dihydro-3-oxo-5-sulfo-2H-indol-2-ylidene)-2,3-dihydro-3-oxo-1H-indole-5-sulfonic acid complex:

| Species | Mouse, male |
| NOAEL   | 8,259 mg/kg |
| Application Route | Ingestion |
| Exposure time     | 23 Months |
| Remarks           | Based on data from similar materials |

### Magnesium stearate:

| Species | Rat |
| NOAEL   | > 100 mg/kg |
| Application Route | Ingestion |
| Exposure time     | 90 Days |
| Remarks           | Based on data from similar materials |

**Aspiration toxicity**

Not classified based on available information.
## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

**oxfendazole:**
- **Toxicity to fish:** LC50 (Lepomis macrochirus (Bluegill sunfish)): > 2.7 mg/l
  - Exposure time: 96 h
- LC50 (Oncorhynchus mykiss (rainbow trout)): > 2.5 mg/l
  - Exposure time: 96 h
- **Toxicity to daphnia and other aquatic invertebrates:** EC50 (Daphnia magna (Water flea)): 0.059 mg/l
  - Exposure time: 48 h
  - Method: OECD Test Guideline 202
- **Toxicity to algae/aquatic plants:** EC50 (Pseudokirchneriella subcapitata (green algae)): > 4 mg/l
  - Exposure time: 72 h
  - Method: OECD Test Guideline 201
  - NOEC (Pseudokirchneriella subcapitata (green algae)): > 4 mg/l
  - Exposure time: 72 h
  - Method: OECD Test Guideline 201
- **Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):** NOEC (Daphnia magna (Water flea)): 0.023 mg/l
  - Exposure time: 21 d
  - Method: OECD Test Guideline 211

**Cellulose:**
- **Toxicity to fish:** LC50 (Oryzias latipes (Japanese medaka)): > 100 mg/l
  - Exposure time: 48 h
  - Remarks: Based on data from similar materials

**Aluminum, 2-(1,3-dihydro-3-oxo-5-sulfo-2H-indol-2-ylidene)-2,3-dihydro-3-oxo-1H-indole-5-sulfonic acid complex:**
- **Toxicity to fish:** LC50 (Leuciscus idus (Golden orfe)): > 1,000 mg/l
  - Exposure time: 96 h
  - Remarks: Based on data from similar materials
- **Toxicity to daphnia and other aquatic invertebrates:** EC50 (Daphnia magna (Water flea)): > 500 mg/l
  - Exposure time: 48 h
  - Remarks: Based on data from similar materials
- **Toxicity to algae/aquatic plants:** NOEC (Desmodesmus subspicatus (green algae)): > 100 mg/l
  - Exposure time: 72 h
  - Remarks: Based on data from similar materials
## Oxfendazole Formulation

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date</th>
<th>SDS Number:</th>
<th>Date of last issue: 04/04/2023</th>
<th>Date of first issue: 08/28/2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.0</td>
<td>09/30/2023</td>
<td>253193-00022</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Toxiciy to microorganisms

<table>
<thead>
<tr>
<th></th>
<th>EC50: &gt; 10,000 mg/l</th>
<th>Exposure time: 3 h</th>
<th>Remarks: Based on data from similar materials</th>
</tr>
</thead>
</table>

### Magnesium stearate:

<table>
<thead>
<tr>
<th></th>
<th>LC50 (Leuciscus idus (Golden orfe)): &gt; 100 mg/l</th>
<th>Exposure time: 48 h</th>
<th>Remarks: Based on data from similar materials</th>
</tr>
</thead>
</table>

|----------------|--------------------------------------------|--------------------|------------------------------------------------------------------------------------------------|

<table>
<thead>
<tr>
<th></th>
<th>EL50 (Pseudokirchneriella subcapitata (green algae)): &gt; 1 mg/l</th>
<th>Exposure time: 72 h</th>
<th>Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 Remarks: Based on data from similar materials No toxicity at the limit of solubility.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th></th>
<th>NOELR (Pseudokirchneriella subcapitata (green algae)): &gt; 1 mg/l</th>
<th>Exposure time: 72 h</th>
<th>Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 Remarks: Based on data from similar materials</th>
</tr>
</thead>
</table>

### Toxicity to algae/aquatic plants

<table>
<thead>
<tr>
<th></th>
<th>EL50 (Pseudokirchneriella subcapitata (green algae)): &gt; 1 mg/l</th>
<th>Exposure time: 72 h</th>
<th>Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 Remarks: Based on data from similar materials No toxicity at the limit of solubility.</th>
</tr>
</thead>
</table>

### Toxicity to microorganisms

<table>
<thead>
<tr>
<th></th>
<th>EC10 (Pseudomonas putida): &gt; 100 mg/l</th>
<th>Exposure time: 16 h</th>
<th>Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 Remarks: Based on data from similar materials</th>
</tr>
</thead>
</table>

### Persistence and degradability

#### Components:

**oxfendazole**

<table>
<thead>
<tr>
<th></th>
<th>Stability in water</th>
<th>Hydrolysis: &lt; 5 % (4 d)</th>
</tr>
</thead>
</table>

**Cellulose**

<table>
<thead>
<tr>
<th></th>
<th>Biodegradability</th>
<th>Result: Readily biodegradable.</th>
</tr>
</thead>
</table>

---

ErC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Method: Directive 67/548/EEC, Annex V, C.3. Remarks: Based on data from similar materials

EC50: > 10,000 mg/l Exposure time: 3 h Remarks: Based on data from similar materials

LC50 (Leuciscus idus (Golden orfe)): > 100 mg/l Exposure time: 48 h Method: DIN 38412 Remarks: Based on data from similar materials


EL50 (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 Remarks: Based on data from similar materials No toxicity at the limit of solubility.

NOELR (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 Remarks: Based on data from similar materials

No toxicity at the limit of solubility.
SAFETY DATA SHEET
according to the Hazardous Products Regulations

Oxfendazole Formulation

Version: 8.0  Revision Date: 09/30/2023  SDS Number: 253193-00022  Date of last issue: 04/04/2023

Date of first issue: 08/28/2015

Aluminum, 2-(1,3-dihydro-3-oxo-5-sulfo-2H-indol-2-ylidene)-2,3-dihydro-3-oxo-1H-indole-5-sulfonic acid complex:

Biodegradability: Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301C
Remarks: Based on data from similar materials

Magnesium stearate:

Biodegradability: Result: Not biodegradable
Remarks: Based on data from similar materials

Bioaccumulative potential

Components:
oxfendazole:

Partition coefficient: n-octanol/water: log Pow: 1.95

Aluminum, 2-(1,3-dihydro-3-oxo-5-sulfo-2H-indol-2-ylidene)-2,3-dihydro-3-oxo-1H-indole-5-sulfonic acid complex:

Bioaccumulation: Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): < 2.5
Method: OECD Test Guideline 305C
Remarks: Based on data from similar materials

Magnesium stearate:

Partition coefficient: n-octanol/water: log Pow: > 4

Mobility in soil

Components:
oxfendazole:

Distribution among environmental compartments: log Koc: 3.2

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues: Do not dispose of waste into sewer.
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. (oxfendazole)
- Class: 9
- Packing group: III
- Labels: 9
- Environmentally hazardous: yes

**IATA-DGR**
- UN/ID No.: UN 3077
- Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (oxfendazole)
- Class: 9
- Packing group: III
- Labels: Miscellaneous
- Packing instruction (cargo aircraft): 956
- Packing instruction (passenger aircraft): 956
- Environmentally hazardous: yes

**IMDG-Code**
- UN number: UN 3077
- Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (oxfendazole)
- 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**

**TDG**
- UN number: UN 3077
- Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (oxfendazole)
- Class: 9
- Packing group: III
- Labels: 9
- ERG Code: 171
- Marine pollutant: yes (oxfendazole)
SAFETY DATA SHEET
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Revision Date: 09/30/2023
SDS Number: 253193-00022
Date of last issue: 04/04/2023
Date of first issue: 08/28/2015

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

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 : USA. ACGIH Threshold Limit Values (TLV)
CA BC OEL : Canada. British Columbia OEL
CA QC OEL : Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
ACGIH / TWA : 8-hour, time-weighted average
CA AB OEL / TWA : 8-hour Occupational exposure limit
CA BC OEL / TWA : 8-hour time weighted average
CA QC OEL / TWA EV : Time-weighted average exposure value

AIIIC - 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; 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; KEGI - 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 Develop-
**SAFETY DATA SHEET**  
according to the Hazardous Products Regulations

**Oxfendazole Formulation**

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

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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