# SAFETY DATA SHEET

## Oxfendazole / Oxyclozanide Formulation

| Version | Revision Date: | SDS Number: | Date of last issue: 2023/04/04 |
|---|---|---|---|
| 3.0 | 2023/09/30 | 7942508-00007 | Date of first issue: 2021/03/19 |

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Oxfendazole / Oxyclozanide Formulation

**Manufacturer or supplier's details**

Company : MSD

Address : 126 E. Lincoln Avenue
Rahway, New Jersey U.S.A. 07065

Telephone : 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 medicine
Restrictions on use : Not applicable

## 2. HAZARDS IDENTIFICATION

**GHS Classification**

Reproductive toxicity : Category 1B

Specific target organ toxicity - single exposure (Oral) : Category 2 (Central nervous system)

Specific target organ toxicity - repeated exposure : Category 2 (Liver, Testis, Brain)

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

**GHS label elements**

Hazard pictograms :

Signal word : Danger

Hazard statements : H360FD May damage fertility. May damage the unborn child.
H371 May cause damage to organs (Central nervous system) if

swallowed.
H373 May cause damage to organs (Liver, Testis, Brain) through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

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.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.
P391 Collect spillage.

**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.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

**Components**

| Chemical name | CAS-No. | Concentration (% w/w) |
|---|---|---|
| oxyclozanide | 2277-92-1 | >= 30 -< 60 |
| oxfendazole | 53716-50-0 | >= 10 -< 25 |
| Starch, oxidized | 65996-62-5 | >= 10 -< 30 |
| Magnesium stearate | 557-04-0 | < 10 |

## 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.<br>Get medical attention. |
| In case of skin contact | : | In case of contact, immediately flush skin with soap and plenty of water.<br>Remove contaminated clothing and shoes.<br>Get medical attention.<br>Wash clothing before reuse.<br>Thoroughly clean shoes before reuse. |
| In case of eye contact | : | If in eyes, rinse well with water.<br>Get medical attention if irritation develops and persists. |
| If swallowed | : | If swallowed, DO NOT induce vomiting.<br>Get medical attention.<br>Rinse mouth thoroughly with water.<br>Never give anything by mouth to an unconscious person. |
| Most important symptoms and effects, both acute and delayed | : | May damage fertility. May damage the unborn child.<br>May cause damage to organs if swallowed.<br>May cause damage to organs through prolonged or repeated exposure.<br>Contact with dust can cause mechanical irritation or drying of the skin.<br>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. |

## 5. FIREFIGHTING MEASURES

| | | |
|---|---|---|
| Suitable extinguishing media | : | Water spray<br>Alcohol-resistant foam<br>Carbon dioxide (CO2)<br>Dry chemical |
| Unsuitable extinguishing media | : | None known. |
| 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.<br>Exposure to combustion products may be a hazard to health. |
| Hazardous combustion products | : | Carbon oxides<br>Chlorine compounds<br>Nitrogen oxides (NOx)<br>Metal oxides<br>Oxides of phosphorus |
| Specific extinguishing methods | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Use water spray to cool unopened containers.<br>Remove undamaged containers from fire area if it is safe to do so.<br>Evacuate area. |
| Special protective equipment for firefighters | : | In the event of fire, wear self-contained breathing apparatus.<br>Use personal protective equipment. |

## 6. ACCIDENTAL RELEASE MEASURES

| | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Use personal protective equipment.<br>Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8). |
| Environmental precautions | : | Avoid release to the environment.<br>Prevent further leakage or spillage if safe to do so.<br>Retain and dispose of contaminated wash water.<br>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.<br>Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).<br>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.<br>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.<br>Sections 13 and 15 of this SDS provide information regarding certain local or national requirements. |

## 7. HANDLING AND STORAGE

| | | |
|---|---|---|
| Technical measures | : | Static electricity may accumulate and ignite suspended dust causing an explosion.<br>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.<br>Do not breathe dust.<br>Do not swallow.<br>Avoid contact with eyes.<br>Wash skin thoroughly after handling.<br>Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment<br>Keep container tightly closed.<br>Minimize dust generation and accumulation.<br>Keep container closed when not in use.<br>Keep away from heat and sources of ignition.<br>Take precautionary measures against static discharges.<br>Do not eat, drink or smoke when using this product.<br>Take care to prevent spills, waste and minimize release to the environment. |
| 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:
Strong oxidizing agents

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---|---|---|---|---|
| oxyclozanide | 2277-92-1 | TWA | 0.4 mg/m3 (OEB 2) | Internal |
| oxfendazole | 53716-50-0 | TWA | 40 µg/m3 (OEB 3) | Internal |
| | | Wipe limit | 400 µg/100 cm² | Internal |
| Starch, oxidized | 65996-62-5 | TWA (inhalable dust) | 0.5 mg/m3 | ACGIH |
| Magnesium stearate | 557-04-0 | NAB | 10 mg/m3 | ID OEL |
| | Further information: Not classified as carcinogenic to humans. Not enough data to classify these materials as carcinogenic to humans or animals | | | |
| | | TWA (Inhalable particulate matter) | 10 mg/m3 | ACGIH |
| | | TWA (Respirable particulate matter) | 3 mg/m3 | ACGIH |

**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.<br>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.<br>Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces.<br>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.<br>When using do not eat, drink or smoke.<br>Wash contaminated clothing before re-use.<br>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. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Appearance | : | powder |
| Colour | : | white to off-white, light cream, cream |
| Odour | : | No data available |
| 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 | : | 0.88 g/cm³ |
| Solubility(ies) | | |
| Water solubility | : | No data available |
| 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 |

## 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.<br>Can react with strong oxidizing agents. |
| Conditions to avoid | : | Heat, flames and sparks.<br>Avoid dust formation. |
| Incompatible materials | : | Oxidizing agents |
| Hazardous decomposition products | : | No hazardous decomposition products are known. |

## 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
Skin contact
Ingestion
Eye contact

**Acute toxicity**

Not classified based on available information.

**Components:**

**oxyclozanide:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): 3,519 mg/kg<br>Target Organs: Central nervous system |
| Acute toxicity (other routes of administration) | : | LDLo (sheep): 10 mg/kg<br>Application Route: Intravenous |

**oxfendazole:**

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

**Magnesium stearate:**

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

**Skin corrosion/irritation**

Not classified based on available information.

**Components:**

**oxyclozanide:**

| | | |
|---|---|---|
| Remarks | : | Not classified due to lack of data. |

**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:**

**oxyclozanide:**

| | | |
|---|---|---|
| Remarks | : | Not classified due to lack of data. |

**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 sensitisation**

**Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.

**Components:**

**oxyclozanide:**

| | | |
|---|---|---|
| Exposure routes | : | Dermal |
| Remarks | : | Not classified due to lack of data. |

**Magnesium stearate:**

| | | |
|---|---|---|
| Test Type | : | Maximisation Test |
| Exposure routes | : | 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:**

**oxyclozanide:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Bacterial reverse mutation assay (AMES)<br>Result: negative<br><br>Test Type: Chromosomal aberration<br>Test system: Human lymphocytes<br>Result: positive<br><br>Test Type: Mouse Lymphoma |

Result: positive

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Application Route: Oral
Result: negative

Test Type: unscheduled DNA synthesis assay
Species: Rat
Cell type: Liver cells
Application Route: Oral
Result: negative

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

**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

**Magnesium stearate:**

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

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

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

**Carcinogenicity**

Not classified based on available information.

**Components:**

**oxyclozanide:**

Remarks : Not classified due to lack of data.

**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 |

**Reproductive toxicity**

May damage fertility. May damage the unborn child.

**Components:**

**oxyclozanide:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Two-generation reproduction toxicity study<br>Species: Rat, male and female<br>Application Route: Oral<br>General Toxicity - Parent: NOAEL: 25 - 35 mg/kg body weight<br>Symptoms: Reduced body weight, No effects on embryofoetal and postnatal development<br>Result: No effects on fertility<br><br>Test Type: Two-generation reproduction toxicity study<br>Species: Rat<br>Application Route: Oral<br>General Toxicity - Parent: LOAEL: 75 - 100 mg/kg body weight<br>Symptoms: Reduced body weight, No effects on embryofoetal and postnatal development<br>Result: No effects on fertility<br><br>Test Type: Two-generation reproduction toxicity study<br>Species: Rat<br>Application Route: Oral<br>Early Embryonic Development: LOAEL: 75 - 100 mg/kg body weight<br>Result: No fetotoxicity, No teratogenic effects<br><br>Test Type: One-generation reproduction toxicity study<br>Species: Rat<br>Application Route: Oral<br>General Toxicity - Parent: LOAEL: 80 - 160 mg/kg body weight<br>Result: No fetotoxicity, No teratogenic effects, No effects on fertility |
| Effects on foetal development | : | Test Type: Development<br>Species: Rat<br>Application Route: Oral |

| | | |
|---|---|---|
| | | Developmental Toxicity: NOAEL: 200 mg/kg body weight<br>Result: No fetotoxicity, No teratogenic effects<br><br>Test Type: Development<br>Species: Rat<br>Application Route: Oral<br>General Toxicity Maternal: LOAEL: 100 mg/kg body weight<br>Result: No fetotoxicity, No teratogenic effects<br><br>Test Type: Development<br>Species: Rabbit<br>Application Route: Oral<br>Developmental Toxicity: NOAEL: 32 mg/kg body weight<br>Result: Fetotoxicity, Skeletal malformations |
| Reproductive toxicity - Assessment | : | Suspected of damaging the unborn child. |

**oxfendazole:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Fertility/early embryonic development<br>Species: Rat, male<br>Application Route: Oral<br>Fertility: NOAEL: 17 mg/kg body weight<br>Target Organs: Testes<br>Result: Effects on fertility<br><br>Test Type: Two-generation reproduction toxicity study<br>Species: Rat<br>Application Route: Oral<br>Fertility: NOAEL: 0.9 mg/kg body weight<br>Target Organs: Liver<br>Result: No effects on fertility<br><br>Test Type: Fertility<br>Species: Mouse<br>Application Route: Oral<br>Duration of Single Treatment: 1 Months<br>Fertility: NOAEL: 750 mg/kg body weight<br>Target Organs: Testes<br>Result: Effects on fertility |
| Effects on foetal development | : | Test Type: Embryo-foetal development<br>Species: Rat<br>Application Route: Oral<br>Developmental Toxicity: NOAEL: 10 mg/kg body weight<br>Result: positive, Fetal effects<br><br>Test Type: Embryo-foetal development<br>Species: Rat<br>Developmental Toxicity: NOAEL: 10 mg/kg body weight<br>Result: positive, Embryo-foetal toxicity<br><br>Test Type: Embryo-foetal development |

| | | |
|---|---|---|
| | | Species: Mouse<br>Application Route: Oral<br>Developmental Toxicity: NOAEL: 108 mg/kg body weight<br>Result: positive, Embryo-foetal toxicity, foetal abnormalities<br><br>Test Type: Embryo-foetal development<br>Species: Rabbit<br>Application Route: Oral<br>Developmental Toxicity: NOAEL: 0.625 mg/kg body weight |
| Reproductive toxicity - Assessment | : | Clear evidence of adverse effects on sexual function and fertility, based on animal experiments., Clear evidence of adverse effects on development, based on animal experiments. |

**Magnesium stearate:**

| | | |
|---|---|---|
| Effects on fertility | : | Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test<br>Species: Rat<br>Application Route: Ingestion<br>Method: OECD Test Guideline 422<br>Result: negative<br>Remarks: Based on data from similar materials |
| Effects on foetal development | : | Test Type: Embryo-foetal development<br>Species: Rat<br>Application Route: Ingestion<br>Result: negative<br>Remarks: Based on data from similar materials |

**STOT - single exposure**

May cause damage to organs (Central nervous system) if swallowed.

**Components:**

**oxyclozanide:**

| | | |
|---|---|---|
| Exposure routes | : | Oral |
| Target Organs | : | Central nervous system |
| Assessment | : | May cause damage to organs. |

**STOT - repeated exposure**

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

**Components:**

**oxyclozanide:**

| | | |
|---|---|---|
| Target Organs | : | Brain, Liver |
| Assessment | : | May cause damage to organs through prolonged or repeated exposure. |

**oxfendazole:**

| | | |
|---|---|---|
| Exposure routes | : | Oral |
| Target Organs | : | Liver, Testis |
| Assessment | : | May cause damage to organs through prolonged or repeated exposure. |

**Repeated dose toxicity**

**Components:**

**oxyclozanide:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 9 mg/kg |
| LOAEL | : | 44.5 mg/kg |
| Application Route | : | Oral |
| Exposure time | : | 3 Months |
| Target Organs | : | Brain, Liver, spleen, Adrenal gland |
| Symptoms | : | Liver effects |

| | | |
|---|---|---|
| Species | : | Dog |
| NOAEL | : | 5 mg/kg |
| LOAEL | : | 25 mg/kg |
| Application Route | : | Oral |
| Exposure time | : | 3 Months |
| Target Organs | : | Brain, Liver |
| Symptoms | : | blood effects, alteration in liver enzymes |

**oxfendazole:**

| | | |
|---|---|---|
| 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 |
| Application Route | : | Oral |
| Exposure time | : | 1 Months |
| Target Organs | : | Liver |

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

**Starch, oxidized:**

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | 22,500 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 90 Days |

**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.

**Components:**

**oxyclozanide:**

Not applicable

**Experience with human exposure**

**Components:**

**oxyclozanide:**

| | | |
|---|---|---|
| Ingestion | : | Symptoms: May cause, Gastrointestinal disturbance, Central nervous system depression |

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Components:**

**oxyclozanide:**

| | | |
|---|---|---|
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 0.69 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202 |
| M-Factor (Acute aquatic toxicity) | : | 1 |
| M-Factor (Chronic aquatic toxicity) | : | 1 |

**oxfendazole:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Lepomis macrochirus (Bluegill sunfish)): > 2.7 mg/l<br>Exposure time: 96 h<br><br>LC50 (Oncorhynchus mykiss (rainbow trout)): > 2.5 mg/l<br>Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 0.059 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202 |
| Toxicity to algae/aquatic plants | : | EC50 (Pseudokirchneriella subcapitata (green algae)): > 4 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br><br>NOEC (Pseudokirchneriella subcapitata (green algae)): > 4 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201 |
| M-Factor (Acute aquatic toxicity) | : | 10 |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Daphnia magna (Water flea)): 0.023 mg/l<br>Exposure time: 21 d<br>Method: OECD Test Guideline 211 |
| M-Factor (Chronic aquatic toxicity) | : | 1 |

**Magnesium stearate:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Leuciscus idus (Golden orfe)): > 100 mg/l<br>Exposure time: 48 h<br>Method: DIN 38412<br>Remarks: Based on data from similar materials |

| | | |
|---|---|---|
| Toxicity to daphnia and other aquatic invertebrates | : | EL50 (Daphnia magna (Water flea)): > 1 mg/l<br>Exposure time: 47 h<br>Test substance: Water Accommodated Fraction<br>Method: Directive 67/548/EEC, Annex V, C.2.<br>Remarks: Based on data from similar materials<br>No toxicity at the limit of solubility |
| Toxicity to algae/aquatic plants | : | EL50 (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l<br>Exposure time: 72 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials<br>No toxicity at the limit of solubility<br><br>NOELR (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l<br>Exposure time: 72 h<br>Test substance: Water Accommodated Fraction<br>Method: OECD Test Guideline 201<br>Remarks: Based on data from similar materials |
| Toxicity to microorganisms | : | EC10 (Pseudomonas putida): > 100 mg/l<br>Exposure time: 16 h<br>Test substance: Water Accommodated Fraction<br>Remarks: Based on data from similar materials |

**Persistence and degradability**

**Components:**

**oxyclozanide:**

| | | |
|---|---|---|
| Stability in water | : | Hydrolysis: 50 %(156 d)<br>Method: OECD Test Guideline 111 |

**oxfendazole:**

| | | |
|---|---|---|
| Stability in water | : | Hydrolysis: < 5 %(4 d) |

**Magnesium stearate:**

| | | |
|---|---|---|
| Biodegradability | : | Result: Not biodegradable<br>Remarks: Based on data from similar materials |

**Bioaccumulative potential**

**Components:**

**oxyclozanide:**

| | | |
|---|---|---|
| Partition coefficient: n-octanol/water | : | log Pow: 3.99<br>pH: 7<br>Method: OECD Test Guideline 107 |

**oxfendazole:**

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

**Magnesium stearate:**

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

**Mobility in soil**

**Components:**

**oxyclozanide:**

| | | |
|---|---|---|
| Distribution among environmental compartments | : | log Koc: 4.83<br>Method: OECD Test Guideline 106 |

**oxfendazole:**

| | | |
|---|---|---|
| Distribution among environmental compartments | : | log Koc: 3.2 |

**Other adverse effects**

No data available

## 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

| | | |
|---|---|---|
| Waste from residues | : | Do not dispose of waste into sewer.<br>Dispose of in accordance with local regulations. |
| Contaminated packaging | : | Empty containers should be taken to an approved waste handling site for recycling or disposal.<br>If not otherwise specified: Dispose of as unused product. |

## 14. TRANSPORT INFORMATION

**International Regulations**

**UNRTDG**

| | | |
|---|---|---|
| UN number | : | UN 3077 |
| Proper shipping name | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.<br>(oxfendazole, oxyclozanide) |
| 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.<br>(oxfendazole, oxyclozanide) |
| 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.<br>(oxfendazole, oxyclozanide) |
| 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.

**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.

## 15. REGULATORY INFORMATION

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

**Minister of Industry Regulation No. 23/M-IND/PER/4/2013 concerning the Revision of Minister of Industry Regulation No. 87/M-IND/PER/9/2009 concerning Globally Harmonized System of Classification and Labelling of Chemicals.**

**Regulation of the Minister of Health No. 472 of 1996 on the Safeguarding of Substances Hazardous to Health**

| | | |
|---|---|---|
| Hazardous substances that must be registered | : | Not applicable |

**Government Regulation No. 74 of 2001 on the Management of Hazardous and Toxic Substances**

| | | |
|---|---|---|
| Hazardous substances approved for use | : | Not applicable |
| Prohibited substances | : | Not applicable |
| Restricted substances | : | Not applicable |

**Regulation of the Ministry of Trade No. 7 of 2022 on Distribution and Control of Hazardous Materials**

| | | |
|---|---|---|
| Type of hazardous materials subject to distribution and | : | Not applicable |

control, Annex I

Type of hazardous materials subject to distribution and control, Annex II : Not applicable

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

AICS : not determined

DSL : not determined

IECSC : not determined

## 16. OTHER INFORMATION

Revision Date : 2023/09/30

**Further information**

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

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

Date format : yyyy/mm/dd

**Full text of other abbreviations**

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ID OEL : Indonesia. Occupational Exposure Limits

ACGIH / TWA : 8-hour, time-weighted average
ID OEL / NAB : Long term exposure limit

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 Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; 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

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.

ID / EN