SAFETY DATA SHEET

Oxytetracycline / Diclofenac Liquid Formulation

SECTION 1. IDENTIFICATION

Product name : Oxytetracycline / Diclofenac Liquid 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
Eye irritation : Category 2A
Skin sensitization : Sub-category 1A
Reproductive toxicity : Category 1A

GHS label elements
Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H360FD May damage fertility. May damage the unborn child.

Precautionary Statements : Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing mist or vapors.
P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves, protective clothing, eye protection and face protection.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical attention.
P333 + P313 IF skin irritation or rash occurs: Get medical attention.
P337 + P313 IF eye irritation persists: Get medical attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage:
P405 Store locked up.

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

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance / Mixture</th>
<th>Mixture</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>Chemical name</th>
<th>Common Name/Synonym</th>
<th>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Pyrrolidone</td>
<td>No data available</td>
<td>616-45-5</td>
<td>&gt;= 30 - &lt; 60 *</td>
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<tr>
<td>Oxytetracycline</td>
<td>No data available</td>
<td>79-57-2</td>
<td>&gt;= 10 - &lt; 30 *</td>
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</tr>
<tr>
<td>Benzyl alcohol</td>
<td>Benzenemethanol</td>
<td>100-51-6</td>
<td>&gt;= 1 - &lt; 5 *</td>
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</tr>
<tr>
<td>Magnesium oxide</td>
<td>Caustic magnesite</td>
<td>1309-48-4</td>
<td>&gt;= 1 - &lt; 5 *</td>
<td></td>
</tr>
<tr>
<td>Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate</td>
<td>No data available</td>
<td>15307-79-6</td>
<td>&gt;= 0.1 - &lt; 1 *</td>
<td></td>
</tr>
<tr>
<td>Sodium hydroxy methane sulphonate</td>
<td>Methanesulfonic acid, 1-hydroxy-, sodium salt (1:1)</td>
<td>149-44-0</td>
<td>&gt;= 0.1 - &lt; 1 *</td>
<td></td>
</tr>
</tbody>
</table>

* Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice: In the case of accident or if you feel unwell, seek medical...
### 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 firefighting:**
- Exposure to combustion products may be a hazard to health.

**Hazardous combustion products:**
- Carbon oxides
- Nitrogen oxides (NOx)

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

**Special protective equipment for 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. Prevent spreading over a wide area (e.g., by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up: Soak up with inert absorbent material. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

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

Local/Total ventilation: If sufficient ventilation is unavailable, use with local exhaust ventilation.

Advice on safe handling: Do not get on skin or clothing. Avoid breathing mist or vapors. Do not swallow. Do not get in 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. 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>
<tbody>
<tr>
<td>Oxytetracycline</td>
<td>79-57-2</td>
<td>TWA</td>
<td>500 µg/m³ (OEB 2)</td>
<td>Internal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magnesium oxide</td>
<td>1309-48-4</td>
<td>TWA (Fumes)</td>
<td>10 mg/m³</td>
<td>CA AB OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Inhalable fume)</td>
<td>10 mg/m³ (Magnesium)</td>
<td>CA BC OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA (Respirable dust and fume)</td>
<td>3 mg/m³ (Magnesium)</td>
<td>CA BC OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL (Respirable dust and fume)</td>
<td>10 mg/m³ (Magnesium)</td>
<td>CA BC OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWAEV (inhalable dust)</td>
<td>10 mg/m³</td>
<td>CA QC OEL</td>
</tr>
<tr>
<td>Sodium [2-[2,6-dichlorophenyl]amino]phenyl]acetate</td>
<td>15307-79-6</td>
<td>TWA</td>
<td>100 µg/m³ (OEB 2)</td>
<td>Internal</td>
</tr>
<tr>
<td>Further information: DSEN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wipe limit</td>
<td></td>
<td>100 µg/100 cm²</td>
<td>Internal</td>
<td></td>
</tr>
</tbody>
</table>

#### Engineering measures

Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., dripless quick connections).

All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment. Laboratory operations do not require special containment.

#### Personal protective equipment

**Respiratory protection**

If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

**Filter type**

Combined particulates and organic vapor type

**Hand protection**

Material: Chemical-resistant gloves

**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.

Hygiene measures:
- Work uniform or laboratory coat.
- 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: liquid
Color: light brown
Odor: No data available
Odor Threshold: No data available
pH: 8.3 - 9.0 (as aqueous solution)
Melting point/freezing point: No data available
Initial boiling point and boiling range: No data available
Flash point: No data available
Evaporation rate: No data available
Flammability (solid, gas): Not applicable
Flammability (liquids): No data available
Upper explosion limit / Upper flammability limit: No data available
Lower explosion limit / Lower flammability limit: No data available
Vapor pressure: No data available
Relative vapor density: No data available
Relative density: No data available
Density: 1.05 - 1.18 g/cm³

Solubility(ies):
  Water solubility: soluble

Partition coefficient: n-octanol/water:
  No data available

Autoignition temperature:
  No data available

Decomposition temperature:
  No data available

Viscosity:
  Viscosity, kinematic: 47.62 mm²/s

Explosive properties:
  Not explosive

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

Molecular weight:
  No data available

Particle size:
  Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity:
  Not classified as a reactivity hazard.

Chemical stability:
  Stable under normal conditions.

Possibility of hazardous reactions:
  Can react with strong oxidizing agents.

Conditions to avoid:
  None known.

Incompatible materials:
  Oxidizing agents

Hazardous decomposition products:
  No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

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

Acute toxicity:
  Not classified based on available information.

Product:
  Acute oral toxicity:
    Acute toxicity estimate: > 2,000 mg/kg
    Method: Calculation method
  
  Acute inhalation toxicity:
    Acute toxicity estimate: > 5 mg/l
    Exposure time: 4 h
    Test atmosphere: dust/mist
    Method: Calculation method
### Components:

**2-Pyrrolidone:**
- **Acute oral toxicity**: LD50 (Rat): > 2,000 mg/kg  
  Method: OECD Test Guideline 401  
  Assessment: The substance or mixture has no acute oral toxicity

**Acute dermal toxicity**: LD50 (Rabbit): > 2,000 mg/kg  
  Method: OECD Test Guideline 402  
  Assessment: The substance or mixture has no acute dermal toxicity

**Oxytetracycline:**
- **Acute oral toxicity**: LD50 (Rat): 4,800 mg/kg  
  LD50 (Mouse): 2,240 mg/kg  
  Remarks: Evidence of phototoxicity was observed

**Acute inhalation toxicity**: Remarks: No data available

**Acute dermal toxicity**: Remarks: No data available

**Acute toxicity (other routes of administration)**: LD50 (Rat): 4,840 mg/kg  
  Application Route: Intramuscular  
  LD50 (Mouse): 3,500 mg/kg  
  Application Route: Subcutaneous

**Benzyl alcohol:**
- **Acute oral toxicity**: LD50 (Rat): 1,620 mg/kg

**Acute inhalation toxicity**: LC50 (Rat): > 4.178 mg/l  
  Exposure time: 4 h  
  Test atmosphere: dust/mist  
  Method: OECD Test Guideline 403

**Magnesium oxide:**
- **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 inhalation toxicity**: LC50 (Rat): > 2.1 mg/l  
  Exposure time: 4 h  
  Test atmosphere: dust/mist  
  Method: OECD Test Guideline 403  
  Remarks: Based on data from similar materials
Sodium [2-[2,6-dichlorophenyl]amino]phenyl]acetate:
Acute oral toxicity: LD50 (Rat): 55 - 240 mg/kg
LD50 (Mouse): 170 - 389 mg/kg

Acute toxicity (other routes of administration):
LD50 (Rat): 97 - 161 mg/kg
Application Route: Intravenous
LD50 (Mouse): 92 - 147 mg/kg
Application Route: Intravenous

Sodium hydroxymethanesulphinate:
Acute oral toxicity:
LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 423
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity:
LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation:
Not classified based on available information.

Components:

2-Pyrrolidone:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Oxytetracycline:
Remarks: No data available

Benzy alcohol:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Sodium [2-[2,6-dichlorophenyl]amino]phenyl]acetate:
Result: irritating

Sodium hydroxymethanesulphinate:
Species: Rat
Result: No skin irritation
SAFETY DATA SHEET

Oxytetracycline / Diclofenac Liquid Formula-tion

Version 3.8  
Revision Date: 04/04/2023

SDS Number: 1313802-00017

Date of last issue: 10/01/2022
Date of first issue: 02/20/2017

**Serious eye damage/eye irritation**
Causes serious eye irritation.

**Components:**

2-Pyrrolidone:
Species: Rabbit  
Result: Irritation to eyes, reversing within 7 days

Oxytetracycline:
Remarks: No data available

Benzyl alcohol:
Species: Rabbit  
Result: Irritation to eyes, reversing within 21 days  
Method: OECD Test Guideline 405

Magnesium oxide:
Species: Rabbit  
Result: No eye irritation  
Method: OECD Test Guideline 405  
Remarks: Based on data from similar materials

Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate:
Result: Mild eye irritation

Sodium hydroxymethanesulphinate:
Species: Rabbit  
Result: No eye irritation  
Method: OECD Test Guideline 405

**Respiratory or skin sensitization**

**Skin sensitization**
May cause an allergic skin reaction.

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

**Components:**

2-Pyrrolidone:
Test Type: Local lymph node assay (LLNA)  
Routes of exposure: Skin contact  
Species: Mouse  
Method: OECD Test Guideline 429  
Result: negative  
Remarks: Based on data from similar materials
SAFETY DATA SHEET

Oxytetracycline / Diclofenac Liquid Formulation

Version 3.8  Revision Date: 04/04/2023  SDS Number: 1313802-00017  Date of last issue: 10/01/2022  Date of first issue: 02/20/2017

**Oxytetracycline:**
Test Type: Human repeat insult patch test (HRIPT)
Result: Sensitizer

**Benzyl alcohol:**
Test Type: Maximization Test
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

**Magnesium oxide:**
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

**Sodium hydroxymethanesulphinate:**
Test Type: Maximization Test
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

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

**Components:**

**2-Pyrrolidone:**
Genotoxicity in vitro: Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

- Test Type: In vitro mammalian cell gene mutation test
  Method: OECD Test Guideline 476
  Result: negative
  Remarks: Based on data from similar materials

- Test Type: Chromosome aberration test in vitro
  Method: OECD Test Guideline 473
  Result: negative

Genotoxicity in vivo: Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative

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## Genotoxicity of Oxytetracycline

### Oxytetracycline:

**Genotoxicity in vitro**

- **Test Type:** Microbial mutagenesis assay (Ames test)
  - Result: negative
- **Test Type:** Mouse Lymphoma
  - **Metabolic activation:** Metabolic activation
  - Result: positive
- **Test Type:** sister chromatid exchange assay
  - **Test system:** Chinese hamster ovary cells
  - Result: equivocal
- **Test Type:** Chromosomal aberration
  - Result: negative

**Genotoxicity in vivo**

- **Test Type:** Micronucleus test
  - **Species:** Mouse
  - **Cell type:** Bone marrow
  - **Application Route:** Oral
  - Result: equivocal
- **Test Type:** in vivo assay
  - **Species:** Mouse
  - **Application Route:** Intraperitoneal injection
  - Result: negative

**Germ cell mutagenicity - Assessment**

Weight of evidence does not support classification as a germ cell mutagen.

## Genotoxicity of Benzyl Alcohol

### Benzyl alcohol:

**Genotoxicity in vitro**

- **Test Type:** Bacterial reverse mutation assay (AMES)
  - Result: negative

**Genotoxicity in vivo**

- **Test Type:** Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
  - **Species:** Mouse
  - **Application Route:** Intraperitoneal injection
  - Result: negative

## Genotoxicity of Magnesium Oxide

### Magnesium oxide:

**Genotoxicity in vitro**

- **Test Type:** Bacterial reverse mutation assay (AMES)
  - **Method:** OECD Test Guideline 471
  - 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:** In vitro mammalian cell gene mutation test
  - **Method:** OECD Test Guideline 476
Result: negative
Remarks: Based on data from similar materials

Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate:
Genotoxicity in vitro:
Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Test Type: Mouse Lymphoma
Result: negative

Genotoxicity in vivo:
Test Type: Chromosomal aberration
Species: CHO
Result: negative

Sodium hydroxymethanesulphinate:
Genotoxicity in vitro:
Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: positive

Genotoxicity in vivo:
Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: positive
Germ cell mutagenicity - Assessment:
Positive result(s) from in vivo mammalian somatic cell mutagenicity tests.

Carcinogenicity
Not classified based on available information.

Components:

2-Pyrroldione:
Species: Mouse
Application Route: Ingestion
Exposure time: 18 month(s)
Result: negative
Remarks: Based on data from similar materials

Oxytetracycline:
Species: Mouse
Application Route: Oral
Exposure time: 104 weeks
Result: negative
### Oxytetracycline / Diclofenac Liquid Formulation

**Species:** Rat  
**Application Route:** Oral  
**Exposure time:** 103 weeks  
**Result:** equivocal  
**Target Organs:** Adrenal gland, Pituitary gland  
**Remarks:** The mechanism or mode of action may not be relevant in humans.

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

**Benzyl alcohol:**  
**Species:** Mouse  
**Application Route:** Ingestion  
**Exposure time:** 103 weeks  
**Method:** OECD Test Guideline 451  
**Result:** negative

**Magnesium oxide:**  
**Species:** Mouse  
**Application Route:** Ingestion  
**Exposure time:** 96 weeks  
**Result:** negative  
**Remarks:** Based on data from similar materials

**Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate:**  
**Species:** Rat  
**Application Route:** Oral  
**Exposure time:** 2 Years  
**Result:** negative

**Species:** Mouse  
**Application Route:** Oral  
**Exposure time:** 2 Years  
**Result:** negative

### Reproductive toxicity
May damage fertility. May damage the unborn child.

### Components:

#### 2-Pyrrolidone:
**Effects on fertility:** Test Type: One-generation reproduction toxicity study  
Species: Rat  
Application Route: Ingestion  
Result: positive  
Remarks: Based on data from similar materials

**Effects on fetal development:** Test Type: Embryo-fetal development  
Species: Rat  
Application Route: Ingestion
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.

Oxytetracycline:
Effects on fertility:
- Test Type: Two-generation reproduction toxicity study
- Species: Rat
- Application Route: Oral
- Fertility: NOAEL: 18 mg/kg body weight
- Result: No effects on fertility, No effect on reproduction capacity, No significant adverse effects were reported

Effects on fetal development:
- Test Type: Embryo-fetal development
- Species: Rat
- Application Route: Oral
- Embryo-fetal toxicity: LOAEL: 48 mg/kg body weight
- Result: Postimplantation loss, Skeletal malformations.

Test Type: Embryo-fetal development
- Species: Rat
- Application Route: Oral
- General Toxicity Maternal: LOAEL: 1,200 mg/kg body weight
- Embryo-fetal toxicity: NOAEL: 1,500 mg/kg body weight
- Result: No teratogenic effects.
- Remarks: Maternal toxicity observed.

Test Type: Embryo-fetal development
- Species: Mouse
- Application Route: Oral
- General Toxicity Maternal: LOAEL: 1,325 mg/kg body weight
- Embryo-fetal toxicity: NOAEL: 2,100 mg/kg body weight
- Result: No teratogenic effects.
- Remarks: Maternal toxicity observed.

Test Type: Embryo-fetal development
- Species: Rabbit
- Application Route: Intramuscular
- Embryo-fetal toxicity: LOAEL: 41.5 mg/kg body weight
- Result: Postimplantation loss, No fetal abnormalities.

Test Type: Embryo-fetal development
- Species: Dog
- Application Route: Intramuscular
- Embryo-fetal toxicity: LOAEL: 20.75 mg/kg body weight
- Result: Skeletal and visceral variations, Postimplantation loss.

Reproductive toxicity - Assessment: Positive evidence of adverse effects on development from human epidemiological studies.
Benzyl alcohol:
Effects on fertility: Test Type: Fertility/early embryonic development
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development: Test Type: Embryo-fetal development
Species: Mouse
Application Route: Ingestion
Result: negative

Magnesium oxide:
Effects on fertility: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate:
Effects on fertility: Test Type: Fertility
Species: Rat, male and female
Application Route: Oral
Fertility: NOAEL: 4 mg/kg body weight
Result: No effects on fertility.

Effects on fetal development: Test Type: Development
Species: Rat
Application Route: Oral
Developmental Toxicity: LOAEL: 1 mg/kg body weight
Result: Embryo-fetal toxicity, No teratogenic effects.

Reproductive toxicity - Assessment: Suspected of damaging the unborn child.

Sodium hydroxymethanesulphinate:
Effects on fertility: Test Type: Combined repeated dose toxicity study with the reproductive/developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 422  
Result: negative

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

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

STOT-single exposure  
Not classified based on available information.

STOT-repeated exposure  
Not classified based on available information.

Components:

Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate:  
Target Organs: Gastrointestinal tract, Blood, lymphatic system, Liver, Prostate  
Assessment: Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

2-Pyrrolidone:  
Species: Rat  
NOAEL: 207 mg/kg  
Application Route: Ingestion  
Exposure time: 3 Months  
Method: OECD Test Guideline 408

Oxytetracycline:  
Species: Rat  
LOAEL: 198 mg/kg  
Application Route: Oral  
Exposure time: 13 Weeks  
Target Organs: Bone  
Remarks: No significant adverse effects were reported  
Species: Mouse  
LOAEL: 7,990 mg/kg  
Application Route: Oral  
Exposure time: 13 Weeks  
Target Organs: Bone
SAFETY DATA SHEET

Oxytetracycline / Diclofenac Liquid Formulation

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Date of first issue: 02/20/2017

Remarks: No significant adverse effects were reported

Species: Dog
NOAEL: 125 mg/kg
LOAEL: 250 mg/kg
Application Route: Oral
Exposure time: 12 Months
Target Organs: Testis
Remarks: Significant toxicity observed in testing

Species: Rat
NOAEL: 40 mg/kg
LOAEL: 100 mg/kg
Application Route: Intraperitoneal
Exposure time: 14 Days
Target Organs: Kidney

Benzyl alcohol:
Species: Rat
NOAEL: 1.072 mg/l
Application Route: inhalation (dust/mist/fume)
Exposure time: 28 Days
Method: OECD Test Guideline 412

Magnesium oxide:
Species: Rat
NOAEL: >= 1,000 mg/kg
Application Route: Ingestion
Exposure time: 28 Days
Method: OECD Test Guideline 407
Remarks: Based on data from similar materials

Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate:
Species: Rat
LOAEL: 0.25 mg/kg
Application Route: Oral
Exposure time: 98 w
Target Organs: Gastrointestinal tract, Blood, lymphatic system, Liver, Prostate

Species: Dog
LOAEL: 1 mg/kg
Application Route: Oral
Exposure time: 12 w
Target Organs: Blood

Species: Baboon
NOAEL: 0.5 mg/kg
LOAEL: 5 mg/kg
Application Route: Oral
Exposure time: 52 w
Target Organs: Gastrointestinal tract, Blood
Symptoms: constipation, Diarrhea

**Sodium hydroxymethanesulphinate:**
- **Species:** Rat
- **NOAEL:** 600 mg/kg
- **Application Route:** Ingestion
- **Exposure time:** 13 Weeks
- **Method:** OECD Test Guideline 408

**Aspiration toxicity**
Not classified based on available information.

**Experience with human exposure**

**Components:**

**Oxytetracycline:**
- **Ingestion:** Symptoms: Gastrointestinal disturbance, tooth discoloration
- **Remarks:** May cause birth defects.

**Sodium [2-[2,6-dichlorophenyl]amino]phenyl]acetate:**
- **Ingestion:** Symptoms: Abdominal pain, Diarrhea, constipation, heartburn, Ulceration, Dizziness, Headache, Breathing difficulties, Rash

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**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Components:**

**2-Pyrrolidone:**
- **Toxicity to fish:** LC50 (Danio rerio (zebra fish)): > 4,600 - 10,000 mg/l
  Exposure time: 96 h
  Method: OECD Test Guideline 203

**Toxicity to daphnia and other aquatic invertebrates:**
- EC50 (Daphnia magna (Water flea)): > 500 mg/l
  Exposure time: 48 h

**Toxicity to algae/aquatic plants:**
- ErC50 (Desmodesmus subspicatus (green algae)): > 500 mg/l
  Exposure time: 72 h
  EC10 (Desmodesmus subspicatus (green algae)): 22.2 mg/l
  Exposure time: 72 h

**Toxicity to microorganisms:**
- EC50: > 1,000 mg/l
  Exposure time: 30 min
  Method: OECD Test Guideline 209

**Oxytetracycline:**
- **Toxicity to fish:** LC50 (Oryzias latipes (Japanese medaka)): 110 mg/l
  Exposure time: 96 h
  Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates:

- **EC50 (Daphnia magna (Water flea)):** 621 mg/l
  - Exposure time: 48 h
  - Method: OECD Test Guideline 202

- **EC50 (Daphnia magna (Water flea)):** 669 mg/l
  - Exposure time: 48 h
  - Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants:

- **EC50 (Anabaena):** 0.032 mg/l
  - Exposure time: 72 h

- **NOEC (Anabaena):** 0.0031 mg/l
  - Exposure time: 72 h

Toxicity to microorganisms:

- **EC50:** 17.9 mg/l
  - Exposure time: 3 h
  - Test Type: Respiration inhibition
  - Method: OECD Test Guideline 209

- **NOEC:** 0.2 mg/l
  - Exposure time: 3 h
  - Test Type: Respiration inhibition
  - Method: OECD Test Guideline 209

**Benzyl alcohol:**

**Toxicity to fish:**

- **LC50 (Pimephales promelas (fathead minnow)):** 460 mg/l
  - Exposure time: 96 h

**Toxicity to daphnia and other aquatic invertebrates:**

- **EC50 (Daphnia magna (Water flea)):** 230 mg/l
  - Exposure time: 48 h
  - Method: OECD Test Guideline 202

**Toxicity to algae/aquatic plants:**

- **EC50 (Pseudokirchneriella subcapitata (green algae)):** 770 mg/l
  - Exposure time: 72 h
  - Method: OECD Test Guideline 201

  - **NOEC (Pseudokirchneriella subcapitata (green algae)):** 310 mg/l
    - Exposure time: 72 h
    - Method: OECD Test Guideline 201

**Magnesium oxide:**

**Toxicity to fish:**

- **LL50 (Pimephales promelas (fathead minnow)):** > 100 mg/l
  - Exposure time: 96 h

  **Remarks:** Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates: EL50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants: EL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to microorganisms: EC50: > 100 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

**Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate***:

Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): 166.6 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 80.1 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants: EC50 (Pseudokirchneriella subcapitata (green algae)): 71.9 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 49.2 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity): NOEC (Pimephales promelas (fathead minnow)): 0.32 mg/l
Exposure time: 32 d
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Daphnia magna (Water flea)): 10 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

**Sodium hydroxymethanesulphinate**:  
Toxicity to fish: LC50 (Leuciscus idus (Golden orfe)): > 10,000 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
SAFETY DATA SHEET

Oxytetracycline / Diclofenac Liquid Formulation

Version 3.8  Revision Date: 04/04/2023  SDS Number: 1313802-00017  Date of last issue: 10/01/2022
Date of first issue: 02/20/2017

Toxicity to algae/aquatic plants:
ErC50 (Desmodesmus subspicatus (green algae)): 370 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Desmodesmus subspicatus (green algae)): 10 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity):
NOEC (Danio rerio (zebra fish)): 13.5 mg/l
Exposure time: 35 d
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):
EC10 (Daphnia magna (Water flea)): 8 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

Toxicity to microorganisms:
NOEC: 10 mg/l
Exposure time: 4 h

Persistence and degradability

Components:

2-Pyrrolidone:
Biodegradability: Result: Readily biodegradable.
Remarks: Based on data from similar materials

Benzyl alcohol:
Biodegradability: Result: Readily biodegradable.
Biodegradation: 92 - 96 %
Exposure time: 14 d

Sodium hydroxymethanesulphinate:
Biodegradability: Result: Readily biodegradable.
Biodegradation: 77 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

Bioaccumulative potential

Components:

2-Pyrrolidone:
Partition coefficient: n-octanol/water: log Pow: -0.71
Method: OECD Test Guideline 107

Benzyl alcohol:
Partition coefficient: n-octanol/water: log Pow: 1.05

Sodium [2-[(2,6-dichlorophenyl)amino]phenyl]acetate:
SAFETY DATA SHEET

Oxytetracycline / Diclofenac Liquid Formulation

Partition coefficient: n-octanol/water: log Pow: 4.51

Sodium hydroxymethanesulphinate:
Partition coefficient: n-octanol/water: log Pow: < 0.3

Mobility in soil
No data available

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

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

SECTION 14. TRANSPORT INFORMATION

International Regulations

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

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

IMDG-Code
UN number: UN 3082
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Oxytetracycline)
Class: 9
Packing group: III
SAFETY DATA SHEET

Oxytetracycline / Diclofenac Liquid Formulation

Version 3.8 Revision Date: 04/04/2023 SDS Number: 1313802-00017 Date of last issue: 10/01/2022 Date of first issue: 02/20/2017

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 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Oxytetracycline)
Class : 9
Packing group : III
Labels : 9
ERG Code : 171
Marine pollutant : yes (Oxytetracycline)

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 BC OEL / STEL : short-term exposure limit
CA QC OEL / TWA EV : Time-weighted average exposure value
SAFETY DATA SHEET

Oxytetracycline / Diclofenac Liquid Formulation

Version 3.8
Revision Date: 04/04/2023
SDS Number: 1313802-00017
Date of last issue: 10/01/2022
Date of first issue: 02/20/2017

All sources of key data used to compile the Material Safety Data Sheet:
- Revision Date: 04/04/2023
- Date format: mm/dd/yyyy

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.

CA / Z8