SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Oxytetracycline Formulation

Manufacturer or supplier’s details

Company : MSD
Address : Rua Coronel Bento Soares, 530
Cruzeiro - Sao Paulo - Brazil  CEP 12730-340
Telephone : 908-740-4000
Emergency telephone : 1-908-423-6000
E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification in accordance with ABNT NBR 14725 Standard

Aerosols : Category 2
Eye irritation : Category 2A
Skin sensitization : Category 1
Reproductive toxicity : Category 1A
Specific target organ toxicity - single exposure : Category 3
Short-term (acute) aquatic hazard : Category 1
Long-term (chronic) aquatic hazard : Category 1

GHS label elements in accordance with ABNT NBR 14725 Standard

Hazard pictograms

Signal Word : Danger
Hazard Statements : H223 Flammable aerosol.
H229 Pressurised container: May burst if heated.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H360D May damage the unborn child.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements:
- Prevention:
  - P201 Obtain special instructions before use.
  - P210 Keep away from heat/ sparks/ open flames/ hot surfaces.
  - No smoking.
  - P211 Do not spray on an open flame or other ignition source.
  - P251 Do not pierce or burn, even after use.
  - P273 Avoid release to the environment.
  - P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

- Response:
  - P391 Collect spillage.

- Storage:
  - P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Other hazards which do not result in classification
May displace oxygen and cause rapid suffocation.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

Components

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butane</td>
<td>106-97-8</td>
<td>Flammable gases, Category 1</td>
<td>&gt;= 20 -&lt; 30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gases under pressure, Liquefied gas Specific target organ toxicity - single exposure, Category 3</td>
<td></td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>67-63-0</td>
<td>Flammable liquids, Category 2</td>
<td>&gt;= 10 -&lt; 20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Eye irritation, Category 2A Specific target organ toxicity - single exposure, Category 3</td>
<td></td>
</tr>
<tr>
<td>Isobutane</td>
<td>75-28-5</td>
<td>Flammable gases, Category 1</td>
<td>&gt;= 10 -&lt; 20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gases under pressure, Liquefied gas Specific target organ toxicity - single exposure, Category 3</td>
<td></td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

Oxytetracycline Formulation

Version 3.7  Revision Date: 27.08.2021  SDS Number: 671600-00014  Date of last issue: 09.04.2021

| Propane       | 74-98-6 | Flammable gases, Category 1  
Gases under pressure, Liquefied gas  
Specific target organ toxicity - single exposure, Category 3 | >= 10 < 20 |
|---------------|---------|--------------------------------------------------------------------------------|
| Oxytetracycline | 79-57-2 | Skin sensitization, Sub-category 1A  
Reproductive toxicity, Category 1A  
Short-term (acute) aquatic hazard, Category 1  
Long-term (chronic) aquatic hazard, Category 1 | >= 5 < 10 |

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.  
If not breathing, give artificial respiration.  
If breathing is difficult, give oxygen.  
Get medical attention immediately.

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

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

Most important symptoms and effects, both acute and delayed : Gastrointestinal disturbance  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
May cause drowsiness or dizziness.  
May damage the unborn child.  
Gas reduces oxygen available for breathing.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

Notes to physician : Treat symptomatically and supportively.
SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media : None known.

Specific hazards during fire fighting : Flash back possible over considerable distance.
Vapors may form explosive mixtures with air.
Exposure to combustion products may be a hazard to health.
If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.

Hazardous combustion products : Carbon 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 : Evacuate personnel to safe areas.
Remove all sources of ignition.
Ventilate the area.
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 : Non-sparking tools should be used.
Soak up with inert absorbent material.
Suppress (knock down) gases/vapors/mists with a water spray jet.
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.
If advised by assessment of the local exposure potential, use
only in an area equipped with explosion-proof exhaust ventila-
tion.

Advice on safe handling : Do not get on skin or clothing.
Avoid breathing spray.
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.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take precautionary measures against static discharges.
Take care to prevent spills, waste and minimize release to the environment.
Do not spray on an open flame or other ignition source.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.
When using do not eat, drink or smoke.
Contaminated work clothing should not be allowed out of the workplace.
Wash contaminated clothing before re-use.

Conditions for safe storage : Store locked up.
Keep tightly closed.
Keep in a cool, well-ventilated place.
Store in accordance with the particular national regulations.
Do not pierce or burn, even after use.
Keep cool. Protect from sunlight.

Materials to avoid : Do not store with the following product types:
Self-reactive substances and mixtures
Organic peroxides
Oxidizing agents
Flammable solids
Pyrophoric liquids
Pyrophoric solids
Self-heating substances and mixtures
Substances and mixtures which in contact with water emit
flammable gases
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>Butane</td>
<td>106-97-8</td>
<td>LT</td>
<td>470 ppm 1.090 mg/m³</td>
<td>BR OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>1.000 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>67-63-0</td>
<td>LT</td>
<td>310 ppm 765 mg/m³</td>
<td>BR OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>1.000 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td>Isobutane</td>
<td>75-28-5</td>
<td>STEL</td>
<td>1.000 ppm</td>
<td>ACGIH</td>
</tr>
<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>Wipe limit</td>
<td>100 µg/100 cm²</td>
<td>Internal</td>
</tr>
</tbody>
</table>

Biological occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propan-2-ol</td>
<td>67-63-0</td>
<td>Acetone</td>
<td>Urine</td>
<td>End of workday at end of workweek</td>
<td>40 mg/l</td>
<td>BR BEI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acetone</td>
<td>Urine</td>
<td>End of shift at end of workweek</td>
<td>40 mg/l</td>
<td>ACGIH BEI</td>
</tr>
</tbody>
</table>

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          : Self-contained breathing apparatus

Hand protection       : Take note that the product is flammable, which may impact the selection of hand protection.

Remarks               : Skin should be washed after contact.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance           : Aerosol containing a liquefied gas
Color: blue

Odor: solvent

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: -80 °C

Evaporation rate: No data available

Flammability (solid, gas): Flammable aerosol.

Flammability (liquids): Not applicable

Upper explosion limit / Upper flammability limit: 9,5 %(V)

Lower explosion limit / Lower flammability limit: 1,8 %(V)

Vapor pressure: No data available

Relative vapor density: No data available

Relative density: No data available

Density: 0,92 g/cm³

Solubility(ies)
Water solubility: No data available

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

Autoignition temperature: No data available

Decomposition temperature: No data available

Viscosity
Viscosity, kinematic: No data available

Explosive properties: Not explosive

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

Particle size: 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:
- Flammable aerosol.
  Vapors may form explosive mixture with air.
  If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.
- Can react with strong oxidizing agents.

Conditions to avoid: Heat, flames and sparks.
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:

Butane:
- Acute inhalation toxicity: LC50 (Rat): 570000 ppm
  Exposure time: 15 min
  Test atmosphere: gas
  Remarks: Based on data from similar materials

Propan-2-ol:
- Acute oral toxicity: LD50 (Rat): > 5.000 mg/kg
- Acute inhalation toxicity: LC50 (Rat): > 25 mg/l
  Exposure time: 6 h
  Test atmosphere: vapor

Isobutane:
- Acute inhalation toxicity: LC50 (Rat): 570000 ppm
  Exposure time: 15 min
  Test atmosphere: gas

Propane:
- Acute inhalation toxicity: LC50 (Rat): > 800000 ppm
  Exposure time: 15 min
  Test atmosphere: gas
**SAFETY DATA SHEET**

**Oxytetracycline Formulation**

<table>
<thead>
<tr>
<th>Version</th>
<th>Revision Date:</th>
<th>SDS Number:</th>
<th>Date of last issue:</th>
<th>Date of first issue:</th>
</tr>
</thead>
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<tr>
<td>3.7</td>
<td>27.08.2021</td>
<td>671600-00014</td>
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<td>12.05.2016</td>
</tr>
</tbody>
</table>

**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

**Skin corrosion/irritation**

Not classified based on available information.

**Components:**

**Propan-2-ol:**

<table>
<thead>
<tr>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rabbit</td>
<td>No skin irritation</td>
</tr>
</tbody>
</table>

**Oxytetracycline:**

| Remarks | No data available |

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Components:**

**Propan-2-ol:**

<table>
<thead>
<tr>
<th>Species</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rabbit</td>
<td>Irritation to eyes, reversing within 21 days</td>
</tr>
</tbody>
</table>

**Oxytetracycline:**

| Remarks | No data available |

**Respiratory or skin sensitization**

**Skin sensitization**

May cause an allergic skin reaction.

**Respiratory sensitization**

Not classified based on available information.

**Components:**

**Propan-2-ol:**

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Routes of exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buehler Test</td>
<td>Skin contact</td>
</tr>
</tbody>
</table>
**SAFETY DATA SHEET**

**Oxytetracycline Formulation**

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<tr>
<th>Version</th>
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</tr>
</tbody>
</table>

**Species** : Guinea pig  
**Method** : OECD Test Guideline 406  
**Result** : negative

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

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

**Components**:

**Butane**:
- **Genotoxicity in vitro**
  - Test Type: Bacterial reverse mutation assay (AMES)  
  - Method: OECD Test Guideline 471  
  - Result: negative
  - 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: Rat  
  - Application Route: inhalation (gas)  
  - Method: OECD Test Guideline 474  
  - Result: negative  
  - Remarks: Based on data from similar materials

**Propan-2-ol**:
- **Genotoxicity in vitro**
  - Test Type: Bacterial reverse mutation assay (AMES)  
  - Result: negative
  - 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: Intraperitoneal injection  
  - Result: negative

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

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

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

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.

Carcinogenicity:  
Not classified based on available information.
SAFETY DATA SHEET

Oxytetracycline Formulation

Components:

Propan-2-ol:
Species: Rat
Application Route: inhalation (vapor)
Exposure time: 104 weeks
Method: OECD Test Guideline 451
Result: negative

Oxytetracycline:
Species: Mouse
Application Route: Oral
Exposure time: 104 weeks
Result: negative
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

Reproductive toxicity
May damage the unborn child.

Components:

Butane:
Effects on fertility: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 422
Result: negative

Effects on fetal development: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 422
Result: negative

Propan-2-ol:
Effects on fertility: Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

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

Isobutane:  
Effects on fertility: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
Species: Rat  
Application Route: inhalation (gas)  
Method: OECD Test Guideline 422  
Result: negative

Effects on fetal development: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
Species: Rat  
Application Route: inhalation (gas)  
Method: OECD Test Guideline 422  
Result: negative

Propane:  
Effects on fertility: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
Species: Rat  
Application Route: inhalation (gas)  
Method: OECD Test Guideline 422  
Result: negative

Effects on fetal development: Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
Species: Rat  
Application Route: inhalation (gas)  
Method: OECD Test Guideline 422  
Result: negative

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  

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.

STOT-single exposure
May cause drowsiness or dizziness.

Components:

Butane:
Assessment : May cause drowsiness or dizziness.
Remarks : Based on data from similar materials

Propan-2-ol:
Assessment : May cause drowsiness or dizziness.

Isobutane:
Assessment : May cause drowsiness or dizziness.

Propane:
Assessment : May cause drowsiness or dizziness.

STOT-repeated exposure
Not classified based on available information.

Repeated dose toxicity

Components:

Butane:
### Propan-2-ol:

- **Species**: Rat
- **NOAEL**: 12.5 mg/l
- **Application Route**: Inhalation (vapor)
- **Exposure time**: 104 Weeks

### Isobutane:

- **Species**: Rat
- **NOAEL**: >= 9000 ppm
- **Application Route**: Inhalation (gas)
- **Exposure time**: 6 Weeks

### Propane:

- **Species**: Rat
- **NOAEL**: 7,214 mg/l
- **Application Route**: Inhalation (gas)
- **Exposure time**: 6 Weeks

### 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
  - **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

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.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:
Propan-2-ol:
Toxicity to fish
LC50 (Pimephales promelas (fathead minnow)): 9.640 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates
EC50 (Daphnia magna (Water flea)): > 10.000 mg/l
Exposure time: 24 h

Toxicity to microorganisms
EC50 (Pseudomonas putida): > 1.050 mg/l
Exposure time: 16 h

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

M-Factor (Acute aquatic toxicity): 10
M-Factor (Chronic aquatic toxicity): 10
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

Persistence and degradability

**Components:**

**Butane:**
- **Biodegradability:** Result: Readily biodegradable.
- **Remarks:** Based on data from similar materials

**Propan-2-ol:**
- **Biodegradability:** Result: rapidly degradable
- **BOD/COD:** BOD: 1.19 (BOD5): COD: 2.23 BOD/COD: 53 %

**Isobutane:**
- **Biodegradability:** Result: Readily biodegradable.
- **Remarks:** Based on data from similar materials

**Propane:**
- **Biodegradability:** Result: Readily biodegradable.
- **Remarks:** Based on data from similar materials

Bioaccumulative potential

**Components:**

**Butane:**
- **Partition coefficient: n-octanol/water:** log Pow: 2.89

**Propan-2-ol:**
- **Partition coefficient: n-octanol/water:** log Pow: 0.05

**Isobutane:**
- **Partition coefficient: n-octanol/water:** log Pow: 2.8

**Propane:**
- **Partition coefficient: n-octanol/water:** log Pow: 2.36
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Mobility in soil
No data available

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
Waste from residues: Dispose of in accordance with local regulations.
Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal.
Empty containers retain residue and can be dangerous.
Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death.
If not otherwise specified: Dispose of as unused product.
Please ensure aerosol cans are sprayed completely empty (including propellant)

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG
UN number: UN 1950
Proper shipping name: AEROSOLS
Class: 2.1
Packing group: Not assigned by regulation
Labels: 2.1

IATA-DGR
UN/ID No.: UN 1950
Proper shipping name: Aerosols, flammable
Class: 2.1
Packing group: Not assigned by regulation
Labels: Flammable Gas
Packing instruction (cargo aircraft): 203
Packing instruction (passenger aircraft): 203

IMDG-Code
UN number: UN 1950
Proper shipping name: AEROSOLS (Oxytetracycline)
Class: 2.1
Packing group: Not assigned by regulation
Labels: 2.1
EmS Code: F-D, S-U
Marine pollutant: yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.
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Date of first issue: 12.05.2016

Domestic regulation

**ANTT**
- UN number: UN 1950
- Proper shipping name: AEROSOLS
- Class: 2.1
- Packing group: Not assigned by regulation
- Labels: 2.1

**Special precautions for user**
The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

**SECTION 15. REGULATORY INFORMATION**

**Safety, health and environmental regulations/legislation specific for the substance or mixture**
- National List of Carcinogenic Agents for Humans - (LINACH): Not applicable
- Brazil. List of chemicals controlled by the Federal Police: Propan-2-ol

**The ingredients of this product are reported in the following inventories:**
- AICS: not determined
- DSL: not determined
- IECSC: not determined

**SECTION 16. OTHER INFORMATION**

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

**Full text of other abbreviations**
- ACGIH: USA. ACGIH Threshold Limit Values (TLV)
- ACGIH BEI: ACGIH - Biological Exposure Indices (BEI)
- BR BEI: Brazil. NR7. Parameters for Biological Control of Occupational Exposure to Some Chemical Agents
- BR OEL: Brazil. NR 15 - Unhealthy activities and operations
- ACGIH / TWA: 8-hour, time-weighted average
- ACGIH / STEL: Short-term exposure limit
- BR OEL / LT: Up to 48 hours /week
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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; SDAT - 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.

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