SAFETY DATA SHEET

Oxytetracycline Formulation

Section 1: Identification

Product name : Oxytetracycline Formulation

Manufacturer or supplier’s details
Company : MSD
Address : 33 Whakatiki Street - Private Bag 908
Upper Hutt - New Zealand
Telephone : +1-908-740-4000
Emergency telephone number : +1-908-423-6000
E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use
Recommended use : Veterinary product

Section 2: Hazard identification

GHS Classification
Aerosols : Category 2
Serious eye damage/eye irritation : Category 2A
Skin sensitisation : Category 1
Reproductive toxicity : Category 1A
Specific target organ toxicity - single exposure : Category 3

GHS label elements
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.

Precautionary statements : Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P261 Avoid breathing spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
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 advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.

Storage:
P405 Store locked up.
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

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

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

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>CAS-No.</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butane</td>
<td>106-97-8</td>
<td>&gt;= 20 -&lt; 30</td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>67-63-0</td>
<td>&gt;= 10 -&lt; 20</td>
</tr>
<tr>
<td>Isobutane</td>
<td>75-28-5</td>
<td>&gt;= 10 -&lt; 20</td>
</tr>
<tr>
<td>Propane</td>
<td>74-98-6</td>
<td>&gt;= 10 -&lt; 20</td>
</tr>
<tr>
<td>oxytetracycline</td>
<td>79-57-2</td>
<td>&gt;= 0.3 -&lt; 10</td>
</tr>
</tbody>
</table>

Section 4: First-aid measures
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Date of last issue: 09.04.2021
Date of first issue: 12.05.2016

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 firefighting: Flash back possible over considerable distance.
Vapours 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 firefighters: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

Hazchem Code: 2YE

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/vapours/mists with a water spray jet.
- For large spills, provide dyeing or other appropriate containment to keep material from spreading. If dyed 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 ventilation.

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 liquids 
Pyrophoric liquids 
Pyrophoric solids 
Self-heating substances and mixtures 
Explosives

Section 8: Exposure controls/personal protection

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butane</td>
<td>106-97-8</td>
<td>WES-TWA</td>
<td>800 ppm 1,900 mg/m³</td>
<td>NZ OEL</td>
</tr>
<tr>
<td>Propan-2-ol</td>
<td>67-63-0</td>
<td>WES-TWA</td>
<td>400 ppm 983 mg/m³</td>
<td>NZ OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>WES-STEL</td>
<td>500 ppm 1,230 mg/m³</td>
<td>NZ OEL</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>200 ppm</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>400 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>

Further information: DSEN
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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 shift at end of work-week</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.

Section 9: Physical and chemical properties

Appearance: Aerosol containing a liquefied gas

Colour: blue

Odour: solvent-like

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: -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)

Vapour pressure: No data available
Relative vapour 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
Auto-ignition 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.
Vapours 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

Exposure routes : 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: vapour

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

**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

**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:**

- **Species**
  - Rabbit

- **Result**
  - No skin irritation

**Oxytetracycline:**

- **Remarks**
  - No data available
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### Serious eye damage/eye irritation

Causes serious eye irritation.

**Components:**

**Propan-2-ol:**

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

**oxytetracycline:**

| Remarks   | No data available |

### Respiratory or skin sensitisation

**Skin sensitisation**

May cause an allergic skin reaction.

**Respiratory sensitisation**

Not classified based on available information.

**Components:**

**Propan-2-ol:**

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Buehler Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure routes</td>
<td>Skin contact</td>
</tr>
<tr>
<td>Species</td>
<td>Guinea pig</td>
</tr>
<tr>
<td>Method</td>
<td>OECD Test Guideline 406</td>
</tr>
<tr>
<td>Result</td>
<td>negative</td>
</tr>
</tbody>
</table>

**oxytetracycline:**

<table>
<thead>
<tr>
<th>Test Type</th>
<th>Human repeat insult patch test (HRIPT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Result</td>
<td>Sensitiser</td>
</tr>
</tbody>
</table>

### Chronic toxicity

**Germ cell mutagenicity**

Not classified based on available information.

**Components:**

**Butane:**

<table>
<thead>
<tr>
<th>Genotoxicity in vitro</th>
<th>Test Type: Bacterial reverse mutation assay (AMES)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Method: OECD Test Guideline 471</td>
</tr>
<tr>
<td></td>
<td>Result: negative</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Genotoxicity in vivo</th>
<th>Test Type: Chromosome aberration test in vitro</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Method: OECD Test Guideline 473</td>
</tr>
<tr>
<td></td>
<td>Result: negative</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Genotoxicity in vivo</th>
<th>Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Species: Rat</td>
</tr>
<tr>
<td></td>
<td>Application Route: inhalation (gas)</td>
</tr>
<tr>
<td></td>
<td>Method: OECD Test Guideline 474</td>
</tr>
<tr>
<td>Genotoxicity</td>
<td>Test Type</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td><strong>Propan-2-ol:</strong></td>
<td>Bacterial reverse mutation assay (AMES)</td>
</tr>
<tr>
<td></td>
<td>In vitro mammalian cell gene mutation test</td>
</tr>
<tr>
<td></td>
<td>Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)</td>
</tr>
<tr>
<td></td>
<td>Species: Mouse</td>
</tr>
<tr>
<td></td>
<td>Application Route: Intraperitoneal injection</td>
</tr>
<tr>
<td><strong>Isobutane:</strong></td>
<td>Chromosome aberration test in vitro</td>
</tr>
<tr>
<td></td>
<td>Method: OECD Test Guideline 473</td>
</tr>
<tr>
<td></td>
<td>Bacterial reverse mutation assay (AMES)</td>
</tr>
<tr>
<td></td>
<td>Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)</td>
</tr>
<tr>
<td></td>
<td>Species: Rat</td>
</tr>
<tr>
<td></td>
<td>Application Route: Inhalation (gas)</td>
</tr>
<tr>
<td></td>
<td>Method: OECD Test Guideline 474</td>
</tr>
<tr>
<td></td>
<td>Result: negative</td>
</tr>
<tr>
<td></td>
<td>Remarks: Based on data from similar materials</td>
</tr>
<tr>
<td><strong>Propane:</strong></td>
<td>Bacterial reverse mutation assay (AMES)</td>
</tr>
<tr>
<td></td>
<td>Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)</td>
</tr>
<tr>
<td></td>
<td>Species: Rat</td>
</tr>
<tr>
<td></td>
<td>Application Route: Inhalation (gas)</td>
</tr>
<tr>
<td></td>
<td>Method: OECD Test Guideline 474</td>
</tr>
<tr>
<td></td>
<td>Result: negative</td>
</tr>
<tr>
<td></td>
<td>Remarks: Based on data from similar materials</td>
</tr>
<tr>
<td><strong>oxytetracycline:</strong></td>
<td>Microbial mutagenesis assay (Ames test)</td>
</tr>
<tr>
<td></td>
<td>Mouse Lymphoma</td>
</tr>
</tbody>
</table>
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.  

Components:  

**Propan-2-ol:**  
Species: Rat  
Application Route: inhalation (vapour)  
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 foetal 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 foetal development : Test Type: Embryo-foetal 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 foetal 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 foetal 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 foetal development

**Test Type:** Embryo-foetal development  
**Species:** Rat  
**Application Route:** Oral  
**Embryo-foetal toxicity:** LOAEL: 48 mg/kg body weight  
**Result:** Postimplantation loss., Skeletal malformations  
**Test Type:** Embryo-foetal development  
**Species:** Rat  
**Application Route:** Oral  
**General Toxicity Maternal:** LOAEL: 1,200 mg/kg body weight  
**Embryo-foetal toxicity:** NOAEL: 1,500 mg/kg body weight  
**Result:** No teratogenic effects  
**Remarks:** Maternal toxicity observed.

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

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

**Test Type:** Embryo-foetal development  
**Species:** Dog  
**Application Route:** Intramuscular  
**Embryo-foetal 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.**
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<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>
<tbody>
<tr>
<td>3.0</td>
<td>27.08.2021</td>
<td>671614-00014</td>
<td>09.04.2021</td>
<td>12.05.2016</td>
</tr>
</tbody>
</table>

### STOT - single exposure

May cause drowsiness or dizziness.

**Components:**

**Butane:**

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>May cause drowsiness or dizziness.</td>
<td>Based on data from similar materials</td>
</tr>
</tbody>
</table>

**Propan-2-ol:**

<table>
<thead>
<tr>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>May cause drowsiness or dizziness.</td>
</tr>
</tbody>
</table>

**Isobutane:**

<table>
<thead>
<tr>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>May cause drowsiness or dizziness.</td>
</tr>
</tbody>
</table>

**Propane:**

<table>
<thead>
<tr>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>May cause drowsiness or dizziness.</td>
</tr>
</tbody>
</table>

### STOT - repeated exposure

Not classified based on available information.

**Repeated dose toxicity**

**Components:**

**Butane:**

<table>
<thead>
<tr>
<th>Species</th>
<th>NOAEL</th>
<th>Application Route</th>
<th>Exposure time</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rat</td>
<td>&gt;= 9000 ppm</td>
<td>inhalation (gas)</td>
<td>6 Weeks</td>
<td>OECD Test Guideline 422</td>
</tr>
</tbody>
</table>

**Propan-2-ol:**

<table>
<thead>
<tr>
<th>Species</th>
<th>NOAEL</th>
<th>Application Route</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rat</td>
<td>12.5 mg/l</td>
<td>inhalation (vapour)</td>
<td>104 Weeks</td>
</tr>
</tbody>
</table>

**Isobutane:**

<table>
<thead>
<tr>
<th>Species</th>
<th>NOAEL</th>
<th>Application Route</th>
<th>Exposure time</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rat</td>
<td>&gt;= 9000 ppm</td>
<td>inhalation (gas)</td>
<td>6 Weeks</td>
<td>OECD Test Guideline 422</td>
</tr>
</tbody>
</table>

**Propane:**

<table>
<thead>
<tr>
<th>Species</th>
<th>NOAEL</th>
<th>Application Route</th>
<th>Exposure time</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rat</td>
<td>7.214 mg/l</td>
<td>inhalation (gas)</td>
<td>6 Weeks</td>
<td>OECD Test Guideline 422</td>
</tr>
</tbody>
</table>
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
**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>
<tbody>
<tr>
<td>3.0</td>
<td>27.08.2021</td>
<td>671614-00014</td>
<td>09.04.2021</td>
<td>12.05.2016</td>
</tr>
</tbody>
</table>

**Toxicity to microorganisms**

<table>
<thead>
<tr>
<th></th>
<th>EC50 (Pseudomonas putida): &gt; 1,050 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exposure time: 16 h</td>
</tr>
</tbody>
</table>

**oxytetracycline:**

**Toxicity to fish**

<table>
<thead>
<tr>
<th></th>
<th>LC50 (Oryzias latipes (Japanese medaka)): 110 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exposure time: 96 h</td>
</tr>
<tr>
<td></td>
<td>Method: OECD Test Guideline 203</td>
</tr>
</tbody>
</table>

**Toxicity to daphnia and other aquatic invertebrates**

<table>
<thead>
<tr>
<th></th>
<th>EC50 (Daphnia magna (Water flea)): 621 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exposure time: 48 h</td>
</tr>
<tr>
<td></td>
<td>Method: OECD Test Guideline 202</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>EC50 (Daphnia magna (Water flea)): 669 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exposure time: 48 h</td>
</tr>
<tr>
<td></td>
<td>Method: OECD Test Guideline 202</td>
</tr>
</tbody>
</table>

**Toxicity to algae/aquatic plants**

<table>
<thead>
<tr>
<th></th>
<th>EC50 (Anabaena): 0.032 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exposure time: 72 h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>NOEC (Anabaena): 0.0031 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exposure time: 72 h</td>
</tr>
</tbody>
</table>

**Toxicity to microorganisms**

<table>
<thead>
<tr>
<th></th>
<th>EC50: 17.9 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exposure time: 3 h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Test Type: Respiration inhibition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Method: OECD Test Guideline 209</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>NOEC: 0.2 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exposure time: 3 h</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Test Type: Respiration inhibition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Method: OECD Test Guideline 209</td>
</tr>
</tbody>
</table>

**Persistence and degradability**

**Components:**

**Butane:**

**Biodegradability**

<table>
<thead>
<tr>
<th></th>
<th>Result: Readily biodegradable.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Remarks: Based on data from similar materials</td>
</tr>
</tbody>
</table>

**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

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

<table>
<thead>
<tr>
<th>UNRTDG</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>UN 1950</td>
<td></td>
</tr>
<tr>
<td>Proper shipping name</td>
<td>AEROSOLS</td>
<td></td>
</tr>
<tr>
<td>Class</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>Packing group</td>
<td>Not assigned by regulation</td>
<td></td>
</tr>
<tr>
<td>Labels</td>
<td>2.1</td>
<td></td>
</tr>
</tbody>
</table>

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.

**National Regulations**

**NZS 5433**
UN number: UN 1950
Proper shipping name: AEROSOLS
Class: 2.1
Packing group: Not assigned by regulation
Labels: 2.1
Hazchem Code: 2YE

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

**Section 15: Regulatory information**

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

**HSNO Approval Number**
not allocated

The components 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 Safety Data Sheet:

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

Date format: dd.mm.yyyy

Full text of other abbreviations:
- ACGIH: USA. ACGIH Threshold Limit Values (TLV)
- ACGIH BEI: ACGIH - Biological Exposure Indices (BEI)
- NZ OEL: New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
- ACGIH / TWA: 8-hour, time-weighted average
- ACGIH / STEL: Short-term exposure limit
- NZ OEL / WES-TWA: Workplace Exposure Standard - Time Weighted average
- NZ OEL / WES-STEL: Workplace Exposure Standard - Short-Term Exposure Limit

Additional abbreviations:
- 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 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.

NZ / EN