




## Oxytetracycline (10%) Formulation

Version 2.1      Revision Date: 05.12.2023      SDS Number: 5495958-00011      Date of last issue: 21.11.2023  
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- Hazard pictograms : 
- Signal word : Danger
- Hazard statements : H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H319 Causes serious eye irritation.  
 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.  
 P264 Wash skin thoroughly after handling.  
 P273 Avoid release to the environment.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- Response:**  
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
 P391 Collect spillage.

Hazardous components which must be listed on the label:  
 oxytetracycline

**2.3 Other hazards**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**SECTION 3: Composition/information on ingredients****3.2 Mixtures****Components**

| Chemical name   | CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | Classification  | Concentration<br>(% w/w) |
|-----------------|---|---|--------------------------|
| oxytetracycline | 79-57-2<br>201-212-8                                  | Skin Sens. 1A;<br>H317<br>Repr. 1A; H360D<br>Aquatic Acute 1;<br>H400<br>Aquatic Chronic 1;<br>H410<br><br>M-Factor (Acute aquatic toxicity): 10<br>M-Factor (Chronic aquatic toxicity): 10 | >= 10 - < 20             |

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|                                 |                                       |   |                  |
|---------------------------------|---------------------------------------|---|------------------|
| Ethanolamine                    | 141-43-5<br>205-483-3<br>603-030-00-8 | Acute Tox. 4; H302<br>Acute Tox. 4; H332<br>Acute Tox. 4; H312<br>Skin Corr. 1B;<br>H314<br>Eye Dam. 1; H318<br>STOT SE 3; H335<br>Aquatic Chronic 3;<br>H412 | $\geq 1 - < 2,5$ |
| Sodium hydroxymethanesulphinate | 149-44-0<br>205-739-4                 | Muta. 2; H341<br>Repr. 2; H361d   | $\geq 0,1 - < 1$ |

For explanation of abbreviations see section 16.

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**SECTION 4: First aid measures**
**4.1 Description of 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.
- 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).
- If inhaled : If inhaled, remove to fresh air.  
Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing 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.

**4.2 Most important symptoms and effects, both acute and delayed**

- Risks : Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
May damage the unborn child.

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**4.3 Indication of any immediate medical attention and special treatment needed**

Treatment : Treat symptomatically and supportively.

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**SECTION 5: Firefighting measures****5.1 Extinguishing media**

Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

Unsuitable extinguishing media : None known.

**5.2 Special hazards arising from the substance or mixture**

Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)

**5.3 Advice for firefighters**

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.

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.

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**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Use personal protective equipment.  
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

**6.2 Environmental precautions**

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.

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### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material.  
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked 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.

### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

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 vapours.  
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.

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.  
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.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep in properly labelled containers. Store locked up. Keep tightly closed. Store in accordance with the particular national regulations.

Advice on common storage : Do not store with the following product types:  
Strong oxidizing agents  
Self-reactive substances and mixtures

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Organic peroxides  
 Explosives  
 Gases

## 7.3 Specific end use(s)

Specific use(s) : No data available

## SECTION 8: Exposure controls/personal protection

## 8.1 Control parameters

## Occupational Exposure Limits

| Components      | CAS-No.  | Value type (Form of exposure)   | Control parameters             | Basis      |
|-----------------|----------|---|--------------------------------|------------|
| oxytetracycline | 79-57-2  | TWA   | 500 µg/m <sup>3</sup> (OEB 2)  | Internal   |
|                 |          | Further information: DSEN   |                                |            |
|                 |          | Wipe limit  | 100 µg/100 cm <sup>2</sup>     | Internal   |
| Ethanolamine    | 141-43-5 | OEL-RL  | 6 ppm                          | ZA OEL     |
|                 |          | Further information: Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents |                                |            |
|                 |          | OEL- RL STEL/C  | 12 ppm                         | ZA OEL     |
|                 |          | Further information: Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents |                                |            |
|                 |          | TWA   | 1 ppm<br>2,5 mg/m <sup>3</sup> | 2006/15/EC |
|                 |          | STEL  | 3 ppm<br>7,6 mg/m <sup>3</sup> | 2006/15/EC |

## Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

| Substance name                | End Use   | Exposure routes | Potential health effects   | Value                    |
|-------------------------------|-----------|-----------------|----------------------------|--------------------------|
| Ethanolamine                  | Workers   | Inhalation      | Long-term local effects    | 3,3 mg/m <sup>3</sup>    |
|                               | Workers   | Skin contact    | Long-term systemic effects | 1 mg/kg bw/day           |
|                               | Consumers | Inhalation      | Long-term local effects    | 2 mg/m <sup>3</sup>      |
|                               | Consumers | Skin contact    | Long-term systemic effects | 0,24 mg/kg bw/day        |
|                               | Consumers | Ingestion       | Long-term systemic effects | 3,75 mg/kg bw/day        |
| Sodium hydroxymethanesulphate | Workers   | Inhalation      | Long-term systemic effects | 21 mg/m <sup>3</sup>     |
|                               | Workers   | Inhalation      | Acute systemic effects     | 140 mg/m <sup>3</sup>    |
|                               | Workers   | Skin contact    | Long-term systemic effects | 6 mg/kg bw/day           |
|                               | Workers   | Skin contact    | Acute systemic effects     | 40 mg/kg bw/day          |
|                               | Workers   | Skin contact    | Acute local effects        | 0,225 mg/cm <sup>2</sup> |

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**Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:**

| Substance name                  | Environmental Compartment | Value                          |
|---------------------------------|---------------------------|--------------------------------|
| Ethanolamine                    | Fresh water               | 0,085 mg/l                     |
|                                 | Freshwater - intermittent | 0,028 mg/l                     |
|                                 | Marine water              | 0,0085 mg/l                    |
|                                 | Sewage treatment plant    | 100 mg/l                       |
|                                 | Fresh water sediment      | 0,434 mg/kg dry weight (d.w.)  |
|                                 | Marine sediment           | 0,0434 mg/kg dry weight (d.w.) |
|                                 | Soil                      | 0,0367 mg/kg dry weight (d.w.) |
| Sodium hydroxymethanesulphinate | Fresh water               | 0,056 mg/l                     |
|                                 | Marine water              | 0,006 mg/l                     |
|                                 | Freshwater - intermittent | 0,056 mg/l                     |
|                                 | Sewage treatment plant    | 1 mg/l                         |
|                                 | Fresh water sediment      | 0,046 mg/kg dry weight (d.w.)  |
|                                 | Marine sediment           | 0,005 mg/kg dry weight (d.w.)  |
|                                 | Soil                      | 0,011 mg/kg dry weight (d.w.)  |

**8.2 Exposure controls****Engineering measures**

Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less 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**

|                          |   |  |
|--------------------------|---|--|
| Eye/face protection      | : | Wear safety glasses with side shields or goggles.<br>If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.<br>Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols. |
| Hand protection          | : |  |
| Material                 | : | Chemical-resistant gloves  |
| Skin and body protection | : | Work uniform or laboratory coat.   |
| 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 vapour type (A-P)  |

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**

|            |   |                          |
|------------|---|--------------------------|
| Appearance | : | liquid, Aqueous solution |
| Colour     | : | No data available        |

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|  |   |  |
|--|---|--|
| Odour  | : | No data available  |
| Odour Threshold                                  | : | No data available  |
| pH   | : | No data available  |
| Melting point/freezing point                     | : | No data available  |
| Initial boiling point and boiling range          | : | No data available  |
| Flash point                                      | : | No data available  |
| Evaporation rate                                 | : | Not applicable   |
| Flammability (solid, gas)                        | : | Not applicable   |
| Upper explosion limit / Upper flammability limit | : | No data available  |
| Lower explosion limit / Lower flammability limit | : | No data available  |
| Vapour pressure                                  | : | No data available  |
| Relative vapour density                          | : | Not applicable   |
| Relative density                                 | : | No data available  |
| Density  | : | No data available  |
| Solubility(ies)                                  |   |  |
| Water solubility                                 | : | No data available  |
| Partition coefficient: n-octanol/water           | : | Not applicable   |
| Auto-ignition temperature                        | : | No data available  |
| Decomposition temperature                        | : | No data available  |
| Viscosity  |   |  |
| Viscosity, kinematic                             | : | Not applicable   |
| Explosive properties                             | : | Not explosive  |
| Oxidizing properties                             | : | The substance or mixture is not classified as oxidizing. |

**9.2 Other information**

|                        |   |                   |
|------------------------|---|-------------------|
| Flammability (liquids) | : | No data available |
| Molecular weight       | : | No data available |
| Particle size          | : | Not applicable    |



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### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

Not classified as a reactivity hazard.

#### 10.2 Chemical stability

Stable under normal conditions.

#### 10.3 Possibility of hazardous reactions

Hazardous reactions : Can react with strong oxidizing agents.

#### 10.4 Conditions to avoid

Conditions to avoid : None known.

#### 10.5 Incompatible materials

Materials to avoid : Oxidizing agents

#### 10.6 Hazardous decomposition products

No hazardous decomposition products are known.

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### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

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: > 20 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2.000 mg/kg  
Method: Calculation method

##### Components:

##### **oxytetracycline:**

Acute oral toxicity : LD50 (Rat): 4.800 mg/kg  
LD50 (Mouse): 2.240 mg/kg  
Remarks: Evidence of phototoxicity was observed

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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

**Ethanolamine:**

Acute oral toxicity : LD50 (Rat): 1.089 mg/kg

Acute inhalation toxicity : Acute toxicity estimate: 11 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: Expert judgement  
Remarks: Based on national or regional regulation.

Acute dermal toxicity : LD50 (Rabbit, female): 1.018 mg/kg

**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**

Causes skin irritation.

**Components:****oxytetracycline:**

Remarks : No data available

**Ethanolamine:**

Species : Rabbit  
Result : Corrosive after 3 minutes to 1 hour of exposure

**Sodium hydroxymethanesulphinate:**

Species : Rat  
Result : No skin irritation

**Serious eye damage/eye irritation**

Causes serious eye irritation.

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**Components:****oxytetracycline:**

Remarks : No data available

**Ethanolamine:**

Species : Rabbit  
Result : Irreversible effects on the eye

**Sodium hydroxymethanesulphinate:**

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

**Respiratory or skin sensitisation****Skin sensitisation**

May cause an allergic skin reaction.

**Respiratory sensitisation**

Not classified based on available information.

**Components:****oxytetracycline:**

Test Type : Human repeat insult patch test (HRIPT)  
Result : Sensitiser

**Ethanolamine:**

Test Type : Maximisation Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Result : negative

**Sodium hydroxymethanesulphinate:**

Test Type : Maximisation Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : negative

**Germ cell mutagenicity**

Not classified based on available information.

**Components:****oxytetracycline:**

Genotoxicity in vitro : Test Type: Microbial mutagenesis assay (Ames test)  
Result: negative

Test Type: Mouse Lymphoma  
Metabolic activation: Metabolic activation

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- 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.
- Ethanolamine:**
- 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
- Test Type: Chromosome aberration test in vitro  
Result: negative
- Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Mouse  
Application Route: Ingestion  
Method: OECD Test Guideline 474  
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

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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:

##### **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:

##### **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.

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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.

**Ethanolamine:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study  
 Species: Rat  
 Application Route: Ingestion  
 Method: OECD Test Guideline 416  
 Result: negative  
 Remarks: Based on data from similar materials

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

**Sodium hydroxymethanesulphinate:**

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

Effects on foetal development : Test Type: Embryo-foetal 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.

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**STOT - single exposure**

Not classified based on available information.

**Components:****Ethanolamine:**

Assessment : May cause respiratory irritation.

**STOT - repeated exposure**

Not classified based on available information.

**Components:****Ethanolamine:**

Assessment : No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

**Repeated dose toxicity****Components:****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

**Ethanolamine:**

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Species : Rat  
 NOAEL : > 120 mg/kg  
 Application Route : Ingestion  
 Exposure time : > 75 Days  
 Remarks : Based on data from similar materials

Species : Rat  
 NOAEL : >= 0,15 mg/l  
 Application Route : inhalation (dust/mist/fume)  
 Exposure time : 28 Days  
 Method : OECD Test Guideline 412

### Sodium hydroxymethanesulphinat:

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.

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Components:

#### **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



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Exposure time: 72 h

M-Factor (Acute 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

M-Factor (Chronic aquatic toxicity) : 10

**Ethanolamine:**

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): 349 mg/l  
 Exposure time: 96 h  
 Method: Directive 67/548/EEC, Annex V, C.1.

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 65 mg/l  
 Exposure time: 48 h  
 Method: Directive 67/548/EEC, Annex V, C.2.

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 2,8 mg/l  
 Exposure time: 72 h  
 Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 1 mg/l  
 Exposure time: 72 h  
 Method: OECD Test Guideline 201

Toxicity to microorganisms : EC10 (Pseudomonas putida): > 1.000 mg/l  
 Exposure time: 30 min  
 Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity) : NOEC: 1,24 mg/l  
 Exposure time: 41 d  
 Species: Oryzias latipes (Orange-red killifish)  
 Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,85 mg/l  
 Exposure time: 21 d  
 Species: Daphnia magna (Water flea)

**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

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|  |   |   |
|--|---|---|
|  |   | Method: OECD Test Guideline 202   |
| Toxicity to algae/aquatic plants                                       | : | ErC50 (Desmodesmus subspicatus (green algae)): 370 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201 |
|  |   | NOEC (Desmodesmus subspicatus (green algae)): 10 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201   |
| Toxicity to microorganisms   | : | NOEC : 10 mg/l<br>Exposure time: 4 h  |
| Toxicity to fish (Chronic toxicity)                                    | : | NOEC: 13,5 mg/l<br>Exposure time: 35 d<br>Species: Danio rerio (zebra fish)<br>Method: OECD Test Guideline 210    |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | EC10: 8 mg/l<br>Exposure time: 21 d<br>Species: Daphnia magna (Water flea)<br>Method: OECD Test Guideline 211     |

### 12.2 Persistence and degradability

#### Components:

##### **Ethanolamine:**

|                  |   |   |
|------------------|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: > 90 %<br>Exposure time: 21 d<br>Method: OECD Test Guideline 301A |
|------------------|---|---|

##### **Sodium hydroxymethanesulphinate:**

|                  |   |   |
|------------------|---|---|
| Biodegradability | : | Result: Readily biodegradable.<br>Biodegradation: 77 %<br>Exposure time: 28 d<br>Method: OECD Test Guideline 301B |
|------------------|---|---|

### 12.3 Bioaccumulative potential

#### Components:

##### **Ethanolamine:**

|  |   |  |
|--|---|--|
| Partition coefficient: n-octanol/water | : | log Pow: -2,3<br>Method: OECD Test Guideline 107 |
|--|---|--|

##### **Sodium hydroxymethanesulphinate:**

|  |   |                |
|--|---|----------------|
| Partition coefficient: n-octanol/water | : | log Pow: < 0,3 |
|--|---|----------------|

### 12.4 Mobility in soil

No data available

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### 12.5 Results of PBT and vPvB assessment

**Product:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Other adverse effects

**Product:**

Endocrine disrupting potential : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities. 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.

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## SECTION 14: Transport information

### 14.1 UN number

ADN : UN 3082

ADR : UN 3082

RID : UN 3082

IMDG : UN 3082

IATA : UN 3082

### 14.2 UN proper shipping name

ADN : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (oxytetracycline)

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (oxytetracycline)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

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(oxytetracycline)

**IMDG** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(oxytetracycline)

**IATA** : Environmentally hazardous substance, liquid, n.o.s.  
(oxytetracycline)

### 14.3 Transport hazard class(es)

|             | Class | Subsidiary risks |
|-------------|-------|------------------|
| <b>ADN</b>  | : 9   |                  |
| <b>ADR</b>  | : 9   |                  |
| <b>RID</b>  | : 9   |                  |
| <b>IMDG</b> | : 9   |                  |
| <b>IATA</b> | : 9   |                  |

### 14.4 Packing group

**ADN**  
Packing group : III  
Classification Code : M6  
Hazard Identification Number : 90  
Labels : 9

**ADR**  
Packing group : III  
Classification Code : M6  
Hazard Identification Number : 90  
Labels : 9  
Tunnel restriction code : (-)

**RID**  
Packing group : III  
Classification Code : M6  
Hazard Identification Number : 90  
Labels : 9

**IMDG**  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F

**IATA (Cargo)**  
Packing instruction (cargo aircraft) : 964  
Packing instruction (LQ) : Y964  
Packing group : III  
Labels : Miscellaneous

**IATA (Passenger)**  
Packing instruction (passenger aircraft) : 964  
Packing instruction (LQ) : Y964  
Packing group : III  
Labels : Miscellaneous

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**14.5 Environmental hazards****ADN**

Environmentally hazardous : yes

**ADR**

Environmentally hazardous : yes

**RID**

Environmentally hazardous : yes

**IMDG**

Marine pollutant : yes

**IATA (Passenger)**

Environmentally hazardous : yes

**IATA (Cargo)**

Environmentally hazardous : yes

**14.6 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.

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Remarks : Not applicable for product as supplied.

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**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

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

AICS : not determined

DSL : not determined

IECSC : not determined

**15.2 Chemical safety assessment**

A Chemical Safety Assessment has not been carried out.

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**SECTION 16: Other information**

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

**Full text of H-Statements**

H302 : Harmful if swallowed.

H312 : Harmful in contact with skin.

H314 : Causes severe skin burns and eye damage.

H317 : May cause an allergic skin reaction.

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|       |   |
|-------|---|
| H318  | : Causes serious eye damage.                            |
| H332  | : Harmful if inhaled.                                   |
| H335  | : May cause respiratory irritation.                     |
| H341  | : Suspected of causing genetic defects.                 |
| H360D | : May damage the unborn child.                          |
| H361d | : Suspected of damaging the unborn child.               |
| H400  | : Very toxic to aquatic life.                           |
| H410  | : Very toxic to aquatic life with long lasting effects. |
| H412  | : Harmful to aquatic life with long lasting effects.    |

**Full text of other abbreviations**

|                         |   |
|-------------------------|---|
| Acute Tox.              | : Acute toxicity  |
| Aquatic Acute           | : Short-term (acute) aquatic hazard   |
| Aquatic Chronic         | : Long-term (chronic) aquatic hazard  |
| Eye Dam.                | : Serious eye damage  |
| Muta.                   | : Germ cell mutagenicity  |
| Repr.                   | : Reproductive toxicity   |
| Skin Corr.              | : Skin corrosion  |
| Skin Sens.              | : Skin sensitisation  |
| STOT SE                 | : Specific target organ toxicity - single exposure  |
| 2006/15/EC              | : Europe. Indicative occupational exposure limit values   |
| ZA OEL                  | : South Africa. The Regulations for Hazardous Chemical Agents, Occupational Exposure Limits               |
| 2006/15/EC / TWA        | : Limit Value - eight hours   |
| 2006/15/EC / STEL       | : Short term exposure limit   |
| ZA OEL / OEL-RL         | : Occupational Exposure Limit Restricted limit - 8- hour exposure or equivalent (12 hour shifts)          |
| ZA OEL / OEL- RL STEL/C | : Occupational Exposure Limit Restricted limit - Short term occupational exposure limits / ceiling limits |

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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 Re-

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striction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; 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

**Further information**

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

**Classification of the mixture:**

|                   |       |
|-------------------|-------|
| Skin Irrit. 2     | H315  |
| Eye Irrit. 2      | H319  |
| Skin Sens. 1      | H317  |
| Repr. 1A          | H360D |
| Aquatic Acute 1   | H400  |
| Aquatic Chronic 1 | H410  |

**Classification procedure:**

|                    |
|--------------------|
| Calculation method |
| Calculation method |
| Calculation method |
| Calculation method |
| Calculation method |
| Calculation method |

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