SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
Trade name: Sulfadiazine (20%) / Trimethoprim (4%) Liquid Formulation

1.2 Relevant identified uses of the substance or mixture and uses advised against
Use of the Substance/Mixture: Veterinary product

1.3 Details of the supplier of the safety data sheet
Company: MSD
20 Spartan Road
1619 Spartan, South Africa

Telephone: +27119239300
E-mail address of person responsible for the SDS: EHSDATASETWARD@msd.com

1.4 Emergency telephone number
+1-908-423-6000

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)
- Skin corrosion, Sub-category 1B: H314: Causes severe skin burns and eye damage.
- Serious eye damage, Category 1: H318: Causes serious eye damage.
- Respiratory sensitisation, Category 1: H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Reproductive toxicity, Category 2: H361d: Suspected of damaging the unborn child.
- Specific target organ toxicity - single exposure, Category 2: H335: May cause respiratory irritation.
- Specific target organ toxicity - repeated exposure, Category 2: H373: May cause damage to organs through prolonged or repeated exposure.
- Long-term (chronic) aquatic hazard, Category 2: H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)
- Hazard pictograms: 
  - Skin corrosion
  - Eye damage
  - Sensitivity
  - Reproductive toxicity
- Signal word: Danger
- Hazard statements: H314 Causes severe skin burns and eye damage.
H334  May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335  May cause respiratory irritation.
H361d Suspected of damaging the unborn child.
H373  May cause damage to organs through prolonged or repeated exposure.
H411  Toxic to aquatic life with long lasting effects.

Supplemental Hazard Statements: EUH071 Corrosive to the respiratory tract.

Precautionary statements:

Prevention:
P273  Avoid release to the environment.
P280  Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P303 + P361 + P353 + P310  IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 + P310  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P308 + P313  IF exposed or concerned: Get medical advice/ attention.
P391  Collect spillage.

Hazardous components which must be listed on the label:
Sulfadiazine
Trimethoprim
Sodium hydroxide

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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfadiazine</td>
<td>68-35-9</td>
<td>Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>200-685-8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Date of last issue: 11.03.2021
Date of first issue: 08.06.2017
SAFETY DATA SHEET

Sulfadiazine (20%) / Trimethoprim (4%) Liquid 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>4.7</td>
<td>27.08.2021</td>
<td>1737588-00014</td>
<td>11.03.2021</td>
<td>08.06.2017</td>
</tr>
</tbody>
</table>

STOT SE 3; H335 Aquatic Acute 1; H400 Aquatic Chronic 1; H410

M-Factor (Acute aquatic toxicity): 1
M-Factor (Chronic aquatic toxicity): 1

<table>
<thead>
<tr>
<th>Trimethoprim</th>
<th>Acute Tox. 4; H302 Repr. 2; H361d STOT RE 1; H372 (Bone marrow) Aquatic Chronic 2; H411</th>
</tr>
</thead>
<tbody>
<tr>
<td>738-70-5</td>
<td>212-006-2</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>Met. Corr. 1; H290 Skin Corr. 1A; H314 Eye Dam. 1; H318</td>
</tr>
<tr>
<td>1310-73-2</td>
<td>215-185-5 011-002-00-6</td>
</tr>
</tbody>
</table>

For explanation of abbreviations see section 16.

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.
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 for at least 15 minutes while removing contaminated clothing and shoes.
Get medical attention immediately.
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 immediately.
If swallowed : If swallowed, DO NOT induce vomiting. If vomiting occurs have person lean forward. Call a physician or poison control centre immediately. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Risks : Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Suspected of damaging the unborn child. May cause damage to organs through prolonged or repeated exposure. Corrosive to the respiratory tract. Causes severe burns. Causes digestive tract burns. Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Extinguishing media

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

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides
Metal oxides
Nitrogen oxides (NOx)

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 method : Use extinguishing measures that are appropriate to local cir-
odds

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.

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.

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.
Do not breathe 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. Already sensitised individuals should consult their physician regarding working with respiratory irritants or sensitisers. Do not eat, drink or smoke when using this product. 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. 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. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations.

Advice on common storage: Do not store with the following product types:
- Strong oxidizing agents
- 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

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfadiazine</td>
<td>68-35-9</td>
<td>TWA</td>
<td>2 mg/m³ (OEB 1)</td>
<td>Internal</td>
</tr>
<tr>
<td>Trimethoprim</td>
<td>738-70-5</td>
<td>TWA</td>
<td>400 µg/m³ (OEB 2)</td>
<td>Internal</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>1310-73-2</td>
<td>STEL OEL-RL</td>
<td>2 mg/m³</td>
<td>ZA OEL</td>
</tr>
</tbody>
</table>

Further information: Recommended Limit

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

<table>
<thead>
<tr>
<th>Substance name</th>
<th>End Use</th>
<th>Exposure routes</th>
<th>Potential health effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long-term local effects</td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

Sulfadiazine (20%) / Trimethoprim (4%) Liquid Formulation

Version 4.7 Revision Date: 27.08.2021 SDS Number: 1737588-00014 Date of last issue: 11.03.2021 Date of first issue: 08.06.2017

| Workers | Inhalation | Long-term local effects | 1 mg/m³ |

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 protection**: Wear safety glasses with side shields or goggles. If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles. Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

- **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**: Particulates type (P)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- **Appearance**: liquid
- **Colour**: off-white to beige
- **Odour**: No data available
- **Odour Threshold**: No data available
- **pH**: 10,0 - 10,5
- **Melting point/freezing point**: No data available
- **Initial boiling point and boiling range**: No data available
- **Flash point**: No data available
- **Evaporation rate**: No data available
- **Flammability (solid, gas)**: Not applicable
- **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 : No data available
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 : No data available

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

9.2 Other information

Flammability (liquids) : No data available
Particle size : Not applicable

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
                   : Acids

10.6 Hazardous decomposition products
No hazardous decomposition products are known.
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

Components:

Sulfadiazine:
Acute oral toxicity:
- LD50 (Mouse): 1.500 mg/kg
  - Acute toxicity estimate: 1.500 mg/kg
  - Method: Calculation method

Acute dermal toxicity:
- LD50 (Rat): > 5.000 mg/kg
  - Remarks: Based on data from similar materials

Acute toxicity (other routes of administration):
- LD50 (Rat): 880 mg/kg
  - Application Route: Intravenous
- LD50 (Mouse): 180 mg/kg
  - Application Route: Intravenous

Trimethoprim:
Acute oral toxicity:
- LD50 (Rat): 1.500 - 5.300 mg/kg
- LD50 (Mouse): 1.910 - 7.000 mg/kg

Acute toxicity (other routes of administration):
- LD50 (Rat): 400 - 500 mg/kg
  - Application Route: Intraperitoneal
- LD50 (Dog): 90 mg/kg
  - Application Route: Intravenous
- LD50 (Mouse): 132 mg/kg
  - Application Route: Intravenous

Sodium hydroxide:
Acute inhalation toxicity:
- Assessment: Corrosive to the respiratory tract.
Skin corrosion/irritation
Causes severe burns.

Components:
Sulfadiazine:
Result: Skin irritation
Remarks: Based on data from similar materials

Sodium hydroxide:
Result: Corrosive after 3 minutes or less of exposure

Serious eye damage/eye irritation
Causes serious eye damage.

Components:
Sulfadiazine:
Species: Rabbit
Result: Irritation to eyes, reversing within 7 days
Remarks: Based on data from similar materials

Sodium hydroxide:
Result: Irreversible effects on the eye
Remarks: Based on skin corrosivity.

Respiratory or skin sensitisation

Skin sensitisation
Not classified based on available information.

Respiratory sensitisation
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Components:
Sulfadiazine:
Test Type: Maximisation Test
Species: Guinea pig
Result: Not a skin sensitizer.
Remarks: Based on data from similar materials

Trimethoprim:
Test Type: Maximisation Test
Exposure routes: Dermal
Species: Guinea pig
Result: Not a skin sensitizer.

Sodium hydroxide:
Test Type: Human repeat insult patch test (HRIPT)
Exposure routes: Skin contact
Sulfadiazine (20%) / Trimethoprim (4%) Liquid Formulation

Result : negative

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

**Components:**

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

Test Type: Chromosomal aberration
Test system: Chinese hamster ovary cells
Result: negative
Remarks: Based on data from similar materials

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

Test Type: Chromosomal aberration
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Result: negative

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Rat
Result: negative

Test Type: Chromosomal aberration
Species: Humans
Result: negative

**Carcinogenicity**
Not classified based on available information.

**Reproductive toxicity**
Suspected of damaging the unborn child.

**Components:**

**Sulfadiazine:**
Effects on foetal development : Test Type: Development
Species: Mouse
Application Route: Oral
General Toxicity Maternal: NOAEL: 1.000 mg/kg body weight
Result: Embryotoxic effects and adverse effects on the off-
spring were detected only at high maternally toxic doses

**Trimethoprim:**

Effects on fertility : Test Type: Fertility  
Species: Rat  
Application Route: Oral  
Fertility: NOAEL: 70 mg/kg body weight  
Result: No effects on fertility

Effects on foetal development : Test Type: Development  
Species: Rat  
Application Route: Oral  
Developmental Toxicity: LOAEL: 70 mg/kg body weight  
Result: Effects on newborn  
Remarks: Maternal toxicity observed.

Test Type: Development  
Species: Rat  
Application Route: Oral  
Developmental Toxicity: LOAEL: 70 mg/kg body weight  
Result: Embryotoxic effects.  
Remarks: Maternal toxicity observed.

Test Type: Development  
Species: Rat  
Application Route: Oral  
Developmental Toxicity: LOAEL: 15 mg/kg body weight  
Result: Embryotoxic effects., Teratogenic effects

Test Type: Development  
Species: Hamster  
Application Route: Oral  
Developmental Toxicity: LOAEL: 1,7 mg/kg body weight  
Result: Embryotoxic effects., No teratogenic effects

Test Type: Development  
Species: Rabbit  
Application Route: Oral  
Developmental Toxicity: LOAEL: 100 mg/kg body weight  
Result: Embryotoxic effects., No teratogenic effects

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

**STOT - single exposure**

May cause respiratory irritation.  
Corrosive to the respiratory tract.

**Components:**

**Sulfadiazine:**

Assessment : May cause respiratory irritation.
STOT - repeated exposure
May cause damage to organs through prolonged or repeated exposure.

Components:

Trimethoprim:
Target Organs : Bone marrow
Assessment : Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

Trimethoprim:
Species : Rat
NOAEL : 100 mg/kg
LOAEL : 300 mg/kg
Application Route : Oral
Exposure time : 6 Months
Target Organs : Bone marrow, Liver, Pituitary gland, Thyroid

Species : Rat
NOAEL : 300 mg/kg
LOAEL : Oral
Exposure time : 3 Months
Target Organs : Bone marrow

Species : Dog
NOAEL : 2.5 mg/kg
LOAEL : 45 mg/kg
Application Route : Oral
Exposure time : 3 Months
Target Organs : Blood, Thyroid

Aspiration toxicity
Not classified based on available information.

Experience with human exposure

Components:

Sulfadiazine:
General Information : May cause eye, skin, and respiratory tract irritation.

Trimethoprim:
Ingestion : Target Organs: Bone marrow
Symptoms: Abdominal pain, Nausea, Vomiting, skin rash, Dizziness, Headache, mental depression, confusion
SAFETY DATA SHEET

Sulfadiazine (20%) / Trimethoprim (4%) Liquid Formulation

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SECTION 12: Ecological information

12.1 Toxicity

Components:

Sulfadiazine:
- Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
  Exposure time: 96 h
  Method: OECD Test Guideline 203

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

- Toxicity to algae/aquatic plants: EC50 (Anabaena flos-aquae): 17 mg/l
  Exposure time: 72 h
  Method: OECD Test Guideline 201
  NOEC (Anabaena flos-aquae): 3.9 mg/l
  Exposure time: 72 h
  Method: OECD Test Guideline 201

  EC50 (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l
  Exposure time: 72 h
  Method: OECD Test Guideline 201

  NOEC (Pseudokirchneriella subcapitata (green algae)): 0.13 mg/l
  Exposure time: 72 h
  Method: OECD Test Guideline 201

  EC50 (Microcystis aeruginosa (blue-green algae)): 0.135 mg/l
  Exposure time: 7 days
  Method: ISO 8692

M-Factor (Acute aquatic toxicity): 1

Toxicity to microorganisms: EC50: > 1.000 mg/l
  Exposure time: 3 h
  Test Type: Respiration inhibition
  Method: OECD Test Guideline 209

  NOEC: 1.000 mg/l
  Exposure time: 3 h
  Test Type: Respiration inhibition
  Method: OECD Test Guideline 209

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC: 6.2 mg/l
  Exposure time: 21 d
  Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

**M-Factor (Chronic aquatic toxicity)**

Trimethoprim:

Toxicity to fish:

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 (Pimephales promelas (fathead minnow))</td>
<td>100 mg/l</td>
<td>96 h</td>
</tr>
</tbody>
</table>

Toxicity to daphnia and other aquatic invertebrates:

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50 (Daphnia magna Straus)</td>
<td>92 mg/l</td>
<td>48 h</td>
</tr>
</tbody>
</table>

Toxicity to algae/aquatic plants:

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50 (Pseudokirchneriella subcapitata (microalgae))</td>
<td>80.3 mg/l</td>
<td>72 h</td>
</tr>
</tbody>
</table>

NOEC (Pseudokirchneriella subcapitata (green algae)):

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 mg/l</td>
<td>72 h</td>
</tr>
</tbody>
</table>

EC50 (Anabaena flos-aquae):

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>253 mg/l</td>
<td>72 h</td>
</tr>
</tbody>
</table>

EC10 (Anabaena flos-aquae):

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>26 mg/l</td>
<td>72 h</td>
</tr>
</tbody>
</table>

Toxicity to fish (Chronic toxicity):

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOEC: 0.157 mg/l</td>
<td>21 d</td>
</tr>
<tr>
<td>Species: Zebrafish</td>
<td></td>
</tr>
</tbody>
</table>

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity):

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Exposure time</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOEC: 6 mg/l</td>
<td>21 d</td>
</tr>
<tr>
<td>Species: Daphnia magna (Water flea)</td>
<td></td>
</tr>
</tbody>
</table>

**12.2 Persistence and degradability**

**Components:**

**Sulfadiazine:**

Biodegradability:

<table>
<thead>
<tr>
<th>Component</th>
<th>Result</th>
<th>Exposure time</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfadiazine</td>
<td>Not readily biodegradable.</td>
<td>28 d</td>
<td>OECD Test Guideline 314</td>
</tr>
</tbody>
</table>

**Trimethoprim:**

Biodegradability:

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfadiazine</td>
<td>0.12</td>
</tr>
</tbody>
</table>

**12.3 Bioaccumulative potential**

**Components:**

**Sulfadiazine:**

Partition coefficient: n-octanol/water:

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfadiazine</td>
<td>0.12</td>
</tr>
</tbody>
</table>

**Trimethoprim:**

Partition coefficient: n-octanol/water:

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trimethoprim</td>
<td>0.91</td>
</tr>
</tbody>
</table>
12.4 Mobility in soil
No data available

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.

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.

Contaminated packaging
: Empty containers should be taken to an approved waste handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number
ADN : UN 1824
ADR : UN 1824
RID : UN 1824
IMDG : UN 1824
IATA : UN 1824

14.2 UN proper shipping name
ADN : SODIUM HYDROXIDE SOLUTION
ADR : SODIUM HYDROXIDE SOLUTION
RID : SODIUM HYDROXIDE SOLUTION
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Date of first issue: 08.06.2017

IMDG : SODIUM HYDROXIDE SOLUTION
       (Sulfadiazine, Trimethoprim)
IATA : Sodium hydroxide solution

14.3 Transport hazard class(es)

ADN  : 8
ADR  : 8
RID  : 8
IMDG : 8
IATA : 8

14.4 Packing group

ADN
Packing group  : II
Classification Code  : C5
Hazard Identification Number  : 80
Labels  : 8

ADR
Packing group  : II
Classification Code  : C5
Hazard Identification Number  : 80
Labels  : 8
Tunnel restriction code  : (E)

RID
Packing group  : II
Classification Code  : C5
Hazard Identification Number  : 80
Labels  : 8

IMDG
Packing group  : II
Labels  : 8
EmS Code  : F-A, S-B

IATA (Cargo)
Packing instruction (cargo aircraft)  : 855
Packing instruction (LQ)  : Y840
Packing group  : II
Labels  : Corrosive

IATA (Passenger)
Packing instruction (passenger aircraft)  : 851
Packing instruction (LQ)  : Y840
Packing group  : II
Labels  : Corrosive

14.5 Environmental hazards

ADN
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Environmentally hazardous: yes

ADR
Environmentally hazardous: yes

RID
Environmentally hazardous: yes

IMDG
Marine pollutant: 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.

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.

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
- H290: May be corrosive to metals.
- H302: Harmful if swallowed.
- H314: Causes severe skin burns and eye damage.
- H315: Causes skin irritation.
- H318: Causes serious eye damage.
- H319: Causes serious eye irritation.
- H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335: May cause respiratory irritation.
- H361d: Suspected of damaging the unborn child.
- H372: Causes damage to organs through prolonged or repeated exposure.
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**Sulfadiazine (20%) / Trimethoprim (4%) Liquid Formulation**

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**H400 :** Very toxic to aquatic life.  
**H410 :** Very toxic to aquatic life with long lasting effects.  
**H411 :** Toxic to aquatic life with long lasting effects.  
**EUH014 :** Reacts violently with water.  
**EUH071 :** Corrosive to the respiratory tract.

**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  
- **Eye Irrit. :** Eye irritation  
- **Met. Corr. :** Corrosive to metals  
- **Repr. :** Reproductive toxicity  
- **Resp. Sens. :** Respiratory sensitisation  
- **Skin Corr. :** Skin corrosion  
- **Skin Irrit. :** Skin irritation  
- **STOT RE :** Specific target organ toxicity - repeated exposure  
- **STOT SE :** Specific target organ toxicity - single exposure  
- **ZA OEL :** South Africa. Hazardous Chemical Substances Regulations, Occupational Exposure Limits

**ZA OEL / STEL OEL-RL :** Short term occupational exposure limits - recommended limit

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European 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 Civil Aviation Organization; 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 Restriction 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
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- United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

| Skin Corr. 1B | H314 | Calculation method |
| Resp. Sens. 1 | H334 | Calculation method |
| Resp. 2 | H361 | Calculation method |
| STOT SE 3 | H35 | Calculation method |
| STOT RE 2 | H373 | Calculation method |
| Aquatic Chronic 2 | H411 | Calculation method |

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.

ZA / EN