

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

Version 8.0      Revision Date: 04.04.2023      SDS Number: 1737558-00018      Date of last issue: 01.10.2022  
Date of first issue: 08.06.2017

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### Section 1: Identification

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

#### Manufacturer or supplier's details

Company : MSD

Address : 33 Whakatiki Street - Private Bag 908  
Upper Hutt - New Zealand

Telephone : 0800 800 543

Emergency telephone number : 0800 764 766 (0800 POISON)    0800 243 622 (0800 CHEMCALL)

E-mail address : EHSDATASTEWARD@msd.com

#### Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product

Restrictions on use :  
Not applicable

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### Section 2: Hazard identification

#### GHS Classification

|| Skin corrosion/irritation : Category 2

|| Serious eye damage/eye irritation : Category 1

Respiratory sensitisation : Category 1

Skin sensitisation : Category 1

|| Reproductive toxicity : Category 2

|| Specific target organ toxicity - single exposure : Category 3


Specific target organ toxicity - repeated exposure : Category 2 (Bone marrow)

Hazardous to the aquatic environment - chronic hazard : Category 2

#### GHS label elements

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Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	<p>H315 Causes skin irritation.          H317 May cause an allergic skin reaction.          H318 Causes serious eye damage.          H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.          H335 May cause respiratory irritation.          H361 Suspected of damaging fertility or the unborn child.          H373 May cause damage to organs (Bone marrow) through prolonged or repeated exposure.          H411 Toxic to aquatic life with long lasting effects.</p>
Precautionary statements	:	<p><b>Prevention:</b>          P201 Obtain special instructions before use.          P202 Do not handle until all safety precautions have been read and understood.          P260 Do not breathe mist or vapours.          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.          P273 Avoid release to the environment.          P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.          P284 Wear respiratory protection.</p> <p><b>Response:</b>          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 + 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.          P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.          P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.          P391 Collect spillage.</p> <p><b>Storage:</b>          P405 Store locked up.</p> <p><b>Disposal:</b>          P501 Dispose of contents/ container to an approved waste</p>

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|| disposal plant.

### Other hazards which do not result in classification

None known.

### Section 3: Composition/information on ingredients

Substance / Mixture : Mixture

#### Components

Chemical name	CAS-No.	Concentration (% w/w)
sulfadiazine	68-35-9	20
Trimethoprim	738-70-5	4
Sodium hydroxide	1310-73-2	3
2,2'-Iminodiethanol	111-42-2	0.6
Sodium metabisulphite	7681-57-4	0.1

### Section 4: First-aid measures

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.  
If not breathing, give artificial respiration.  
If breathing is difficult, give oxygen.  
Get medical attention immediately.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water 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.
- Most important symptoms and effects, both acute and delayed : Causes digestive tract burns.  
Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).  
Causes skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye damage.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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<div style="border-left: 2px solid black; border-right: 2px solid black; height: 40px; margin-bottom: 10px;"></div>	<p>May cause respiratory irritation. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.</p>
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 (CO <sub>2</sub> ) Dry chemical
Unsuitable extinguishing media	: None known.
Specific hazards during fire-fighting	: Exposure to combustion products may be a hazard to health.
Hazardous combustion products	: Carbon oxides Metal oxides Nitrogen oxides (NO <sub>x</sub> )
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	: 2R

### Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures	: Use personal protective equipment. Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
<div style="border-left: 2px solid black; border-right: 2px solid black; height: 40px; margin-bottom: 10px;"></div>	<p>Environmental precautions</p> <p>: 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.</p>
Methods and materials for containment and 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 dis-

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posal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

### Section 7: Handling and storage

- |                             |   |   |
|-----------------------------|---|---|
| Technical measures          | : | See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.   |
| Local/Total ventilation     | : | If sufficient ventilation is unavailable, use with local exhaust ventilation.   |
| Advice on safe handling     | : | Do not get on skin or clothing.<br>Do not breathe mist or vapours.<br>Do not swallow.<br>Do not get in eyes.<br>Wash skin thoroughly after handling.<br>Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment<br>Keep container tightly closed.<br>Already sensitised individuals, and those susceptible to asthma, allergies, chronic or recurrent respiratory disease, should consult their physician regarding working with respiratory irritants or sensitisers.<br>Do not eat, drink or smoke when using this product.<br>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.<br>When using do not eat, drink or smoke.<br>Wash contaminated clothing before re-use.<br>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.  |
| Conditions for safe storage | : | Keep in properly labelled containers.<br>Store locked up.<br>Keep tightly closed.<br>Keep in a cool, well-ventilated place.<br>Store in accordance with the particular national regulations.  |
| Materials to avoid          | : | Do not store with the following product types:<br>Self-reactive substances and mixtures<br>Organic peroxides<br>Oxidizing agents<br>Explosives  |

### Section 8: Exposure controls/personal protection

#### Components with workplace control parameters

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Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
sulfadiazine	68-35-9	TWA	2 mg/m <sup>3</sup> (OEB 1)	Internal
Trimethoprim	738-70-5	TWA	400 µg/m <sup>3</sup> (OEB 2)	Internal
Sodium hydroxide	1310-73-2	WES-Ceiling	2 mg/m <sup>3</sup>	NZ OEL
		C	2 mg/m <sup>3</sup>	ACGIH
2,2'-Iminodiethanol	111-42-2	WES-TWA	3 ppm 13 mg/m <sup>3</sup>	NZ OEL
Further information: Skin absorption				
		TWA (Inhalable fraction and vapor)	1 mg/m <sup>3</sup>	ACGIH
Sodium metabisulphite	7681-57-4	WES-TWA	5 mg/m <sup>3</sup>	NZ OEL
Further information: Skin sensitiser, Respiratory sensitiser				
		TWA	5 mg/m <sup>3</sup>	ACGIH

**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

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

Hand protection  
Material : Chemical-resistant gloves

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

Skin and body protection : Work uniform or laboratory coat.

### Section 9: 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

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Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
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.
Particle size	:	Not applicable

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**Section 10: Stability and reactivity**

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Can react with strong oxidizing agents.

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Conditions to avoid	:	None known.
Incompatible materials	:	Oxidizing agents Acids
Hazardous decomposition products	:	No hazardous decomposition products are known.

### Section 11: Toxicological information

Exposure routes	:	Inhalation Skin contact Ingestion Eye contact
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#### Acute toxicity

|| Not classified based on available information.

#### Product:

Acute oral toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method

#### Components:

##### **sulfadiazine:**

Acute oral toxicity	:	LD50 (Mouse): 1,500 mg/kg
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:**



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Acute oral toxicity	:	Acute toxicity estimate: 500 mg/kg Method: Expert judgement Remarks: Based on national or regional regulation.
Acute inhalation toxicity	:	Assessment: Corrosive to the respiratory tract.
Acute dermal toxicity	:	Acute toxicity estimate: 1,100 mg/kg Method: Expert judgement Remarks: Based on national or regional regulation.

### 2,2'-Iminodiethanol:

Acute oral toxicity	:	LD50 (Rat): 1,600 mg/kg
Acute inhalation toxicity	:	LC50 (Rat, male): > 3.35 mg/l Exposure time: 4 h Test atmosphere: dust/mist

### Sodium metabisulphite:

Acute oral toxicity	:	LD50 (Rat): 1,540 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC50 (Rat): > 5.5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Remarks: Based on data from similar materials
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 402 Remarks: Based on data from similar materials

### Skin corrosion/irritation

Causes skin irritation.

### Components:

#### sulfadiazine:

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

#### Sodium hydroxide:

Result	:	Corrosive after 3 minutes or less of exposure
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#### 2,2'-Iminodiethanol:

Species	:	Rabbit
Result	:	Skin irritation

#### Sodium metabisulphite:

Result	:	Skin irritation
Remarks	:	Based on national or regional regulation.

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### 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.

##### 2,2'-Iminodiethanol:

|| Species : Rabbit  
|| Result : Irreversible effects on the eye

##### Sodium metabisulphite:

|| Species : Rabbit  
|| Result : Irreversible effects on the eye  
|| Method : OECD Test Guideline 405

### Respiratory or skin sensitisation

#### Skin sensitisation

|| May cause an allergic skin reaction.

#### 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  
|| Result : negative

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### 2,2'-Iminodiethanol:

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

### Sodium metabisulphite:

Assessment	: Probability or evidence of skin sensitisation in humans
Remarks	: Based on national or regional regulation.

Assessment	: May cause sensitisation by inhalation.
Remarks	: Based on national or regional regulation.

### Chronic toxicity

### 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
Genotoxicity in vitro	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
Genotoxicity in vitro	Test Type: In vitro mammalian cell gene mutation test
	Result: negative
Genotoxicity in vitro	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
Genotoxicity in vivo	Test Type: Chromosomal aberration
	Species: Humans Result: negative

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### 2,2'-Iminodiethanol:

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

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

Test Type: Chromosome aberration test in vitro  
Result: negative

Test Type: In vitro sister chromatid exchange assay in mammalian cells  
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)  
Species: Mouse  
Application Route: Skin contact  
Result: negative

### Sodium metabisulphite:

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

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

### Carcinogenicity

|| Not classified based on available information.

### Components:

#### 2,2'-Iminodiethanol:

Species : Mouse  
Application Route : Skin contact  
Exposure time : 103 weeks  
Result : positive  
Remarks : The mechanism or mode of action may not be relevant in humans.

Species : Rat  
Application Route : Skin contact

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Exposure time : 103 weeks  
Result : negative

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

### Sodium metabisulphite:

Species : Mouse  
Application Route : Ingestion  
Exposure time : 24 Months  
Result : negative  
Remarks : Based on data from similar materials

### Reproductive toxicity

Suspected of damaging fertility or 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 offspring 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

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	<p>Test Type: Development          Species: Hamster          Application Route: Oral          Developmental Toxicity: LOAEL: 1.7 mg/kg body weight          Result: Embryotoxic effects., No teratogenic effects</p> <p>Test Type: Development          Species: Rabbit          Application Route: Oral          Developmental Toxicity: LOAEL: 100 mg/kg body weight          Result: Embryotoxic effects., No teratogenic effects</p>
Reproductive toxicity - Assessment	: Suspected of damaging the unborn child.
<b>2,2'-Iminodiethanol:</b>	
Effects on fertility	: Test Type: One-generation reproduction toxicity study Species: Rat Application Route: Ingestion Method: OECD Test Guideline 443 Result: positive
Effects on foetal development	: Test Type: One-generation reproduction toxicity study Species: Rat Application Route: Ingestion Method: OECD Test Guideline 443 Result: positive
Reproductive toxicity - Assessment	: Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

### Sodium metabisulphite:

Effects on fertility	: Test Type: Three-generation study Species: Rat Application Route: Ingestion Result: negative
Effects on foetal development	: Test Type: Embryo-foetal development Species: Rabbit Application Route: Ingestion Result: negative

### STOT - single exposure

|| May cause respiratory irritation.

### Components:

#### sulfadiazine:

|| Assessment : May cause respiratory irritation.

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### STOT - repeated exposure

|| May cause damage to organs (Bone marrow) through prolonged or repeated exposure.

#### Components:

##### Trimethoprim:

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

##### 2,2'-Iminodiethanol:

|| Exposure routes : Ingestion  
|| Target Organs : Kidney, Blood, Liver, Nervous system  
|| Assessment : Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.

|| Exposure routes : inhalation (dust/mist/fume)  
|| Target Organs : Kidney, Blood  
|| Assessment : Shown to produce significant health effects in animals at concentrations of >0.02 to 0.2 mg/l/6h/d.

|| Exposure routes : Skin contact  
|| Target Organs : Blood, Liver, Kidney  
|| Assessment : Shown to produce significant health effects in animals at concentrations of >20 to 200 mg/kg bw.

### 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  
|| LOAEL : 300 mg/kg  
|| Application Route : 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

##### 2,2'-Iminodiethanol:

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Species	: Rat, female
LOAEL	: 14 mg/kg
Application Route	: Ingestion
Exposure time	: 13 Weeks
Species	: Rat
NOAEL	: 0.015 mg/l
Application Route	: inhalation (dust/mist/fume)
Exposure time	: 90 Days
Method	: OECD Test Guideline 413
Species	: Rat
LOAEL	: 32 mg/kg
Application Route	: Skin contact
Exposure time	: 13 Weeks

### Sodium metabisulphite:

Species	: Rat
NOAEL	: 110 mg/kg
LOAEL	: 220 mg/kg
Application Route	: Ingestion
Exposure time	: 104 Weeks

### 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

## Section 12: Ecological information

### Ecotoxicity

#### 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



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

### Trimethoprim:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 100 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna Straus): 92 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (microalgae)): 80.3 mg/l Exposure time: 72 h  NOEC (Pseudokirchneriella subcapitata (green algae)): 16 mg/l

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

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		Exposure time: 72 h
		EC50 (Anabaena flos-aquae): 253 mg/l Exposure time: 72 h
		EC10 (Anabaena flos-aquae): 26 mg/l Exposure time: 72 h
Toxicity to fish (Chronic toxicity)	:	NOEC (Zebrafish): 0.157 mg/l Exposure time: 21 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 6 mg/l Exposure time: 21 d
Toxicity to microorganisms	:	EC10: 16.7 mg/l Exposure time: 3 hrs Test Type: Respiration inhibition Method: OECD Test Guideline 209
		EC50: > 1,000 mg/l Exposure time: 3 hrs Test Type: Respiration inhibition Method: OECD Test Guideline 209

### 2,2'-Iminodiethanol:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 460 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Ceriodaphnia dubia (water flea)): 30.1 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 9.5 mg/l Exposure time: 72 h
		EC10 (Pseudokirchneriella subcapitata (green algae)): 1.1 mg/l Exposure time: 72 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EC10 (Daphnia magna (Water flea)): 1.05 mg/l Exposure time: 21 d
Toxicity to microorganisms	:	EC10 (activated sludge): > 1,000 mg/l Exposure time: 30 min Method: OECD Test Guideline 209

### Sodium metabisulphite:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 178 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 89 mg/l Exposure time: 48 h

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

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Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): 43.8 mg/l Exposure time: 72 h
		EC10 (Desmodesmus subspicatus (green algae)): 33.3 mg/l Exposure time: 72 h
Toxicity to fish (Chronic toxicity)	:	NOEC (Danio rerio (zebra fish)): >= 316 mg/l Exposure time: 34 d Method: OECD Test Guideline 210 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): >= 10 mg/l Exposure time: 21 d
Toxicity to microorganisms	:	EC10 (Pseudomonas putida): 30.8 mg/l Exposure time: 17 h

### Persistence and degradability

#### Components:

##### **sulfadiazine:**

Biodegradability	:	Result: Not readily biodegradable. Biodegradation: 0 % Exposure time: 28 d Method: OECD Test Guideline 314
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##### **Trimethoprim:**

Biodegradability	:	Result: Not readily biodegradable. Biodegradation: 4 % Exposure time: 28 d Method: OECD Test Guideline 301D
		Result: Not inherently biodegradable. Biodegradation: 0 % Exposure time: 28 d Method: OECD Test Guideline 302B

##### **2,2'-Iminodiethanol:**

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 93 % Exposure time: 28 d Method: OECD Test Guideline 301F
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### Bioaccumulative potential

#### Components:

##### **sulfadiazine:**

Partition coefficient: n-octanol/water	:	log Pow: 0.12
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**Sulfadiazine (20%) / Trimethoprim (4%) Liquid Formulation**

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**Trimethoprim:**

Partition coefficient: n-octanol/water : log Pow: 0.91

**2,2'-Iminodiethanol:**

Partition coefficient: n-octanol/water : log Pow: -2.46  
Method: OECD Test Guideline 107

**Mobility in soil**

No data available

**Other adverse effects**

No data available

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**Section 13: Disposal considerations****Disposal methods**

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

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**Section 14: Transport information****International Regulations****UNRTDG**

UN number : UN 1824  
Proper shipping name : SODIUM HYDROXIDE SOLUTION  
Class : 8  
Packing group : II  
Labels : 8

**IATA-DGR**

UN/ID No. : UN 1824  
Proper shipping name : Sodium hydroxide solution  
Class : 8  
Packing group : II  
Labels : Corrosive  
Packing instruction (cargo aircraft) : 855  
Packing instruction (passenger aircraft) : 851

**IMDG-Code**

UN number : UN 1824  
Proper shipping name : SODIUM HYDROXIDE SOLUTION  
(sulfadiazine, Trimethoprim)  
Class : 8  
Packing group : II  
Labels : 8  
EmS Code : F-A, S-B

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

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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 1824
Proper shipping name	: SODIUM HYDROXIDE SOLUTION
Class	: 8
Packing group	: II
Labels	: 8
Hazchem Code	: 2R

**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.

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**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

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**Section 16: Other information**

Revision Date : 04.04.2023

**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/>

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)
NZ OEL	: New Zealand. Workplace Exposure Standards for Atmospher-

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

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### ic Contaminants

ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / C	:	Ceiling limit
NZ OEL / WES-TWA	:	Workplace Exposure Standard - Time Weighted average
NZ OEL / WES-Ceiling	:	Workplace Exposure Standard - Ceiling

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; 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