

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

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
6.0	04/04/2023	1737581-00019	Date of first issue: 06/08/2017

SECTION 1. IDENTIFICATION

Product name : Sulfadiazine (20%) / Trimethoprim (4%) Liquid Formulation
Other means of identification : No data available

Manufacturer or supplier's details

Company name of supplier : Merck & Co., Inc
Address : 126 E. Lincoln Avenue
Rahway, New Jersey U.S.A. 07065
Telephone : 908-740-4000
Emergency telephone : 1-908-423-6000
E-mail address : EHSDATASTEWARD@merck.com

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product
Restrictions on use : Not applicable

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with the Hazardous Products Regulations**

Skin corrosion : Category 1B
Serious eye damage : Category 1
Respiratory sensitization : Category 1
Reproductive toxicity : Category 2
Specific target organ toxicity : Category 3
- single exposure
Specific target organ toxicity : Category 1 (Bone marrow)
- repeated exposure

GHS label elements

Hazard pictograms :



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.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs (Bone marrow) through prolonged or repeated exposure.

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

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
6.0	04/04/2023	1737581-00019	Date of first issue: 06/08/2017

Precautionary Statements**Prevention:**

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 vapors.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves, protective clothing, eye protection and face protection.
P284 Wear respiratory protection.

Response:

P301 + P330 + P331 + P310 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER.
P303 + P361 + P353 + P310 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER.
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.
P308 + P313 IF exposed or concerned: Get medical attention.
P342 + P311 If experiencing respiratory symptoms: Call a doctor.
P363 Wash contaminated clothing before reuse.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents and container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
sulfadiazine	Benzenesulfonamide, 4-amino-N-2-pyrimidinyl-	68-35-9	20
Trimethoprim	2,4-Pyrimidinedia-	738-70-5	4

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

Version 6.0 Revision Date: 04/04/2023 SDS Number: 1737581-00019 Date of last issue: 10/01/2022
Date of first issue: 06/08/2017

	mine, 5-[(3,4,5-trimethoxy-phenyl)methyl]-		
Sodium hydroxide	Caustic soda	1310-73-2	3
2,2'-Iminodiethanol	Ethanol, 2,2'-iminobis-	111-42-2	0.6

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 center 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 serious eye damage.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
Suspected of damaging fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.
Causes severe burns.
- 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

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

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
6.0	04/04/2023	1737581-00019	Date of first issue: 06/08/2017

	Alcohol-resistant foam Carbon dioxide (CO ₂) 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 _x)
Specific extinguishing methods	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.
Special protective equipment for fire-fighters	: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Use personal protective equipment. Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
Environmental precautions	: Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g., by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	: Soak up with inert absorbent material. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures	: See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Local/Total ventilation	: If sufficient ventilation is unavailable, use with local exhaust

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

Version 6.0 Revision Date: 04/04/2023 SDS Number: 1737581-00019 Date of last issue: 10/01/2022
Date of first issue: 06/08/2017

- Advice on safe handling : ventilation.
Do not get on skin or clothing.
Do not breathe mist or vapors.
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 sensitized individuals, and those susceptible to asthma, allergies, chronic or recurrent respiratory disease, should consult their physician regarding working with respiratory irritants or sensitizers.
Do not eat, drink or smoke when using this product.
Take care to prevent spills, waste and minimize release to the environment.
- Conditions for safe storage : Keep in properly labeled containers.
Store locked up.
Keep tightly closed.
Keep in a cool, well-ventilated place.
Store in accordance with the particular national regulations.
- Materials to avoid : Do not store with the following product types:
Strong oxidizing agents
Self-reactive substances and mixtures
Organic peroxides
Explosives
Gases

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
sulfadiazine	68-35-9	TWA	2 mg/m ³ (OEB 1)	Internal
Trimethoprim	738-70-5	TWA	400 µg/m ³ (OEB 2)	Internal
Sodium hydroxide	1310-73-2	(c)	2 mg/m ³	CA AB OEL
		C	2 mg/m ³	CA BC OEL
		C	2 mg/m ³	CA QC OEL
		C	2 mg/m ³	ACGIH
2,2'-Iminodiethanol	111-42-2	TWA	2 mg/m ³	CA AB OEL
		TWA	2 mg/m ³	CA BC OEL
		TWAEV (inhalable fraction and vapour)	1 mg/m ³	CA QC OEL
		TWA (Inhalable fraction and	1 mg/m ³	ACGIH

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

Version 6.0	Revision Date: 04/04/2023	SDS Number: 1737581-00019	Date of last issue: 10/01/2022 Date of first issue: 06/08/2017
----------------	------------------------------	------------------------------	-------------------------------------------------------------------

II		vapor)		
----	--	--------	--	--

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 : Chemical-resistant gloves

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.

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Color : off-white to beige

Odor : No data available

Odor 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

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

Version 6.0	Revision Date: 04/04/2023	SDS Number: 1737581-00019	Date of last issue: 10/01/2022 Date of first issue: 06/08/2017
----------------	------------------------------	------------------------------	-------------------------------------------------------------------

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
Vapor pressure	:	No data available
Relative vapor 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
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Particle size	:	Not applicable

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

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

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
6.0	04/04/2023	1737581-00019	Date of first issue: 06/08/2017

SECTION 11. TOXICOLOGICAL INFORMATION**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 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.

2,2'-Iminodiethanol:

Acute oral toxicity : LD50 (Rat): 1,600 mg/kg
Acute inhalation toxicity : LC50 (Rat, male): > 3.35 mg/l

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

Version 6.0	Revision Date: 04/04/2023	SDS Number: 1737581-00019	Date of last issue: 10/01/2022 Date of first issue: 06/08/2017
----------------	------------------------------	------------------------------	-------------------------------------------------------------------

||| Exposure time: 4 h
Test atmosphere: dust/mist

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

2,2'-Iminodiethanol:

|| Species : Rabbit
|| Result : Skin irritation

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

Respiratory or skin sensitization**Skin sensitization**

|| Not classified based on available information.

Respiratory sensitization

|| May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Components:**sulfadiazine:**

|| Test Type : Maximization Test
|| Species : Guinea pig

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

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
6.0	04/04/2023	1737581-00019	Date of first issue: 06/08/2017

Result	: Not a skin sensitizer.
Remarks	: Based on data from similar materials

Trimethoprim:

Test Type	: Maximization Test
Routes of exposure	: Dermal
Species	: Guinea pig
Result	: Not a skin sensitizer.

Sodium hydroxide:

Test Type	: Human repeat insult patch test (HRIPT)
Routes of exposure	: Skin contact
Result	: negative

2,2'-Iminodiethanol:

Test Type	: Maximization Test
Routes of exposure	: Skin contact
Species	: Guinea pig
Method	: OECD Test Guideline 406
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

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

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
6.0	04/04/2023	1737581-00019	Date of first issue: 06/08/2017

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

Test Type: Chromosomal aberration
Species: Humans
Result: negative

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

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
Exposure time : 103 weeks
Result : negative

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

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

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

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
6.0	04/04/2023	1737581-00019	Date of first issue: 06/08/2017

Components:**sulfadiazine:**

Effects on fetal 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 fetal 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.

2,2'-Iminodiethanol:

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

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
6.0	04/04/2023	1737581-00019	Date of first issue: 06/08/2017

Effects on fertility	:	Test Type: One-generation reproduction toxicity study Species: Rat Application Route: Ingestion Method: OECD Test Guideline 443 Result: positive
Effects on fetal 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.

STOT-single exposure

May cause respiratory irritation.

Components:

sulfadiazine:

Assessment : May cause respiratory irritation.

STOT-repeated exposure

Causes 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:

Routes of exposure	:	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.

Routes of exposure	:	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.

Routes of exposure	:	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.

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

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
6.0	04/04/2023	1737581-00019	Date of first issue: 06/08/2017

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:

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

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:

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

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
6.0	04/04/2023	1737581-00019	Date of first issue: 06/08/2017

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
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
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
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

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

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
6.0	04/04/2023	1737581-00019	Date of first issue: 06/08/2017

II

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 (Water flea)): 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 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

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

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
6.0	04/04/2023	1737581-00019	Date of first issue: 06/08/2017

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

Persistence and degradability**Components:****sulfadiazine:**

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

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
------------------	---	-------------------------------------------------------------------------------------------------------------------

Bioaccumulative potential**Components:****sulfadiazine:**

Partition coefficient: n-octanol/water	:	log Pow: 0.12
----------------------------------------	---	---------------

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
----------------------------------------	---	---------------------------------------------------

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

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
6.0	04/04/2023	1737581-00019	Date of first issue: 06/08/2017

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues	:	Dispose of in accordance with local regulations.
Contaminated packaging	:	Do not dispose of waste into sewer.
	:	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**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
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation**TDG**

UN number	:	UN 1824
Proper shipping name	:	SODIUM HYDROXIDE SOLUTION

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

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
6.0	04/04/2023	1737581-00019	Date of first issue: 06/08/2017

Class	:	8
Packing group	:	II
Labels	:	8
ERG Code	:	154
Marine pollutant	:	yes(sulfadiazine, Trimethoprim)

Special precautions for user

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

SECTION 15. REGULATORY INFORMATION

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

AICS	:	not determined
DSL	:	not determined
IECSC	:	not determined

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
CA AB OEL	:	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	:	Canada. British Columbia OEL
CA QC OEL	:	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / C	:	Ceiling limit
CA AB OEL / TWA	:	8-hour Occupational exposure limit
CA AB OEL / (c)	:	ceiling occupational exposure limit
CA BC OEL / TWA	:	8-hour time weighted average
CA BC OEL / C	:	ceiling limit
CA QC OEL / TWAEV	:	Time-weighted average exposure value
CA QC OEL / C	:	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 Chemi-

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

Version	Revision Date:	SDS Number:	Date of last issue: 10/01/2022
6.0	04/04/2023	1737581-00019	Date of first issue: 06/08/2017

cal 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

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

Revision Date : 04/04/2023
Date format : mm/dd/yyyy

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

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.

CA / Z8