SECTION 1 – IDENTIFICATION

1.1. Product Identifier

Product form:	Mixture
Product name:	Bioline Sentinel
Product code:	N/A

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use of chemical:	Agriculture and Horticulture – Suitable for use on soils and plants.

1.3. Details of the supplier of the safety data sheet

Manufacturer:	Bioline Corporation
Address:	PO Box 429, 3971 Old Walnut Road, Alvinston Ontario Canada, N0N 1A0
Phone:	(800) 353-3086 or (519) 847-5748
Fax:	(519) 847-5878
Emergency number:	(613) 996-6666 Canutec (Call Collect)

SECTION 2 – HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Skin Corrosion/Irritation, Category 1
Eye Damage/Irritation, Category 1

2.2. Label elements

Hazard pictograms:	
GHS Signal Word:	**Danger**
GHS Hazard Statement:	H314 – Causes severe burns.
	H318 – Causes serious eye damage.
GHS Precaution Statement:	

General:	P264 – Wash any contact areas thoroughly after handling.
	P270 – Do not eat, drink or smoke when using this product.
	P280 – Wear protective gloves / eye protection / face protection.
Response:	P302+P352 – IF ON SKIN: Immediately wash with plenty of soap and water.
	P305+P351+P338 – IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
	P332+P313 – If skin irritation occurs: Get medical advice/ attention.
	P317 – Consult a doctor immediately.
Storage:	Not applicable.
Disposal:	P501 – Dispose of contents/packaging as per local legislation.

2.3. Other hazards

No additional information available.

SECTION 3: COMPOSITION/INFORMATION INGREDIENTS

3.1 Substances

Not applicable.

3.2 Mixture

Component	C.A.S. #	% wt.	GHS Classification
Tetrahydroxy silane (synonym: silicic acid, mono-silicic acid)	10193-36-9	1%	Skin Burns. 1, H314 Eye Damage. 1, H318
Fulvic Acid	479-66-3	2%	Skin Irrit. 2B, H315 Eye Irrit. 2A, H319

SECTION 4 – FIRST AID MEASURES

4.1 Description of First Aid Measures

General:	If medical advice is needed, have product container or label at hand.

Inhalation:	Non-toxic in case of inhalation. No known effect or critical hazard. Get medical attention if symptoms occur. If any ill effects are felt, remove person to fresh air and keep at rest and in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. Obtain medical attention if breathing difficulty persists or are severe.
Skin:	Wash affected area with plenty of soap and water (at least 15 minutes). Obtain medical attention if irritation develops or persists. Wash contaminated clothing before reuse.
Eyes:	Immediately flush with water for a prolonged period (at least 15 minutes) while holding eyelids open. Check and remove contact lens. Consult a doctor immediately.
Ingestion:	If swallowed, rinse mouth with water. Do not induce vomiting. Seek medical attention if a large amount is swallowed. Get medical advice and attention if you feel unwell.

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

Symptoms/ injuries	Damage to eyes, skin and respiratory tract.
Symptoms/ injuries after inhalation	None expected under normal conditions of use. Overexposure may be irritating to the respiratory tract.
Symptoms/ injures after skin contact	Contact causes sever burns.
Symptoms/ injures after eye contact	Contact causes serious eye damage.
Symptoms/ injures after ingestion	Cause irritation of the lining of the mouth, throat, and gastrointestinal tract.

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

No additional information available.

SECTION 5 – FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing media:	Carbon dioxide, foam, powder or water spray.

Unsuitable Extinguishing media:	Do not use a forceful jet of water. This may spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard:	Under conditions of fire, toxic and/or corrosive fumes may be produced. Thermal decomposition may release toxic and/or corrosive fumes of hydrogen compounds, ammonia, nitrogen oxides, phosphorus oxides, sulfur oxides, zinc oxides, and hydrogen chloride.
Explosion hazard:	Product is not explosive.

5.3. Advice for firefighters

Fire fighting instructions:	Keep upwind. Use water spray or fog for cooling exposed containers. Cool non-leaking, fire-exposed containers with water spray.
Protection during firefighting:	Firefighters must use full bunker gear including NIOSH/OSHA approved self-containing breathing apparatus and protective clothing to protect against potential hazardous combustion or decomposition products.
Other information:	None.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

General measures

Handle in accordance with good industrial hygiene and safety practice.

For non-emergency and emergency personnel

Protective equipment:	Wear suitable protective clothing, gloves and eye/face protection. Ensure adequate ventilation. Avoid contact with eyes and skin.
Emergency procedures:	Stop leak if safe to do so. Evacuate unnecessary personnel. Contain any spills with dikes or absorbents to prevent migration into sewers or streams. Ventilate area.

6.2. Environmental precautions

Do not release into sewer/surface water/groundwater. If product enters the wastewater or sewer, contact the competent authority. Dilute with plenty of water. Prevent penetration into wastewater, sewer, wells or cellars.

6.3. Methods and materials for containment and cleaning up

For containment:	Contain large spills with dikes and try to prevent migration and entry into drains or waterways.
Methods for cleaning up:	Clean up any spills as soon as possible with liquid absorbing material (sand,tripolite, acid binder, universal binder, sawdust). Collect in suitable tanks for recovery or disposal. Discharge the collected material according to regulations.

SECTION 7 – HANDLING & STORAGE

7.1. Precautions for safe handling

Precautions for safe handling:	Wear appropriate personal protective equipment (see section 8). Avoid all eyes and skin contact. Ensure there is adequate ventilation when handling. Do not inhale vapour/spray.
Hygiene measures:	Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking, and when leaving work. Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions:	Store tightly closed in a dry, cool and well ventilated place away from heat and direct sunlight. Protect from physical damage.
Incompatible materials:	Zinc, copper bearing alloys, aluminum.
Prohibitions on mixed storage:	None known.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

No exposure limit values known.

8.2. Exposure controls

Appropriate engineering controls:	Ensure adequate ventilation, especially in confined areas.
Hand protection:	Wear protective gloves.
Eye protection:	Wear chemical safety goggles or full face shield.
Skin and body protection:	Wear suitable protective clothing.
Respiratory protection:	Not normally required, if vapors or mists exceed acceptable levels, wear a MSHA/NIOSH approved respirator.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid.
Appearance:	Clear.
Colour:	Golden Yellow to light Amber.
Odour:	Sweet and slightly acidic.
Odour threshold:	No data available.
pH:	0.75
Melting point:	32°F / 0°C
Freezing point:	No data available.
Boiling point:	203°F / 95°C
Flash point:	Not applicable.
Evaporation rate:	No data available.
Flammability (solid, gas)	Non-flammable substance. Non-combustible.
Lower flammability limit:	Not applicable.
Upper flammability limit:	Not applicable.
Vapour pressure (mmHg):	No data available.
Vapour density:	No data available.
Relative density:	1.06
Solubility:	Water: Miscible.
Partition coefficient: N-Octanol/Water:	No data available.
Auto-ignition temperature:	Not applicable.
Decomposition temperature:	No data available.
Viscosity:	5 – 7

SECTION 10 – STABILITY AND REACTIVITY

Reactivity:	Non-reactive at ambient temperature and under normal conditions of storage and use.
Chemical Stability:	Stable under normal conditions of storage and use. Loses stability in conditions of pH >1.5. Loses stability when heated.
Possibility of Hazardous Reactions:	Hazardous reactions will not occur under normal conditions of storage and use.

Conditions to Avoid:	Avoid temperatures above 40°C and UV light.
Incompatible Materials:	Incompatible with alkali and oxidizing substances.
Hazardous Decomposition Products:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute Toxicity	Acute oral toxicity LD50 value of SI (OH) 4 (silicic acid): >5000mg/kg Rat

Skin Contact:	Category 1. Contact causes severe burns. pH: 0.75
Eye Contact:	Category 1. Causes serious eye damage. pH: 0.75
Inhalation:	Not classified. No known effect or critical hazard. Overexposure may be irritating to the respiratory tract.
Ingestion:	Not classified. No known effect or critical hazard. May cause irritation of the lining of the mouth, throat, and gastrointestinal tract.
Germ cell mutagenicity:	Not classified. No known effect or critical hazard.
Carcinogenicity:	Not classified. No known effect or critical hazard.
Specific target organ toxicity (repeated exposure):	Not classified. No known effect or critical hazard.
Reproductive toxicity:	Not classified. No known effect or critical hazard.
Specific target organ toxicity (single exposure):	Not classified. No known effect or critical hazard.
Aspiration hazard:	Not classified. No known effect or critical hazard.
Chronic symptoms:	No known effect or critical hazard.

SECTION 12 – ECOLOGICAL INFORMATION

12.1. Ecotoxicity

Conclusion/ summary: No Data Available.

Product/ Ingredient name	Result	Species	Exposure
Silicic Acid	No Data		
Fulvic Acid	No Data		

12.2. Persistence and degradability

Conclusion/ summary: No Data Available.

12.3. Bioaccumulative potential

Conclusion/ summary: Data not available.

12.4. Mobility in soil

Conclusion/ summary: Data not available.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste disposal recommendations:	Disposal of the substance poses no threat. Rinse packaging before disposal. Empty containers/packaging may not be used for other purposes. Dispose of waste in accordance with all local, regional, national and international regulations.

SECTION 14 – TRANSPORT INFORMATION

Not controlled or regulated under: DOT/ TDG; ADR/ RID; IMDG; or ICAO/ IATA.

14.1. UN number

Not applicable.

14.2 UN proper shipping name

Not applicable.

14.3. Packing Group

Not applicable.

14.4 Environmental Hazards

Not Applicable.

14.5 Additional Information

Non-hazardous.

SECTION 15 – REGULATORY INFORMATION

15.1. Canadian regulation

Canadian NPRI:	None of the components are listed.
CEPA Toxic Substances:	None of the components are listed.
Canadian DSL Inventory:	All the components of this product are listed or exempted.

15.2. U.S. Federal Regulations

SARA 311/312: Immediate (acute) health hazard.
Delayed (chronic) health hazard.

CAS #	Hazard Components	TSCA Inventory	S. 302 (EHS)	S. 304 RQ	S. 313
479-66-3	Fulvic Acid	No	No	No	No
10193-36-9	Tetrahydroxy silane	Listed	No	No	No

SECTION 16 – OTHER INFORMATION

16.1. History

Date of printing: 2025/07/25
Date of issue/ Date of revision: 2025/07/25
Date of previous issue: N/A
Version: 1

16.3. General comment

This document contains health, safety, and environmental information useful to emergency response agencies, health care providers, manufacturers, and workers/employees. It does not replace the precautionary language, use directions, or the storage and disposal information found on the product label.

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