

Other hazards

Very toxic to aquatic life with long lasting effects

Unknown Acute Toxicity

1 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
Zinc sulfate	7733-02-0	1-10
Organic Acid	Proprietary	1-10

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First Aid Measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek immediate medical attention/advice.
Skin Contact	Wash with soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation persists, call a physician.
Inhalation	Remove to fresh air. Call a physician immediately.
Ingestion	Call a physician or poison control center immediately.

Most important symptoms and effects

Symptoms	Inhalation may cause irritation to nasal passages. Contact will cause irritation and redness to exposed areas.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Dry chemical. Carbon dioxide (CO₂). Foam. Water spray (fog).

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Combustion products may be toxic.

Hazardous Combustion Products Nitrogen oxides (NO_x).

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Use water spray to keep fire-exposed containers cool. Do not release runoff from fire control methods to sewers or waterways.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required.

Environmental precautions

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Absorb liquids by covering with clay or tuber absorbent material. Vacuum or sweep up material and place in a disposal container.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Observe precautions found on the label. Wash thoroughly after handling. Use personal protection recommended in Section 8.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Do not contaminate food or feed stuffs. Protect from freezing.

Incompatible Materials Strong oxidizers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Organic Acid	-	15 mg / m3 (Total)	-

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Refer to 29 CFR 1910.133 for eye and face protection regulations.

Skin and Body Protection Protective gloves are not required, but recommended. Wear suitable protective clothing.

Respiratory Protection None normally required. If vapors may exceed acceptable levels, use an OSHA/NIOSH-approved respirator or mask for protection against pesticide dusts, mists, and vapors.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid	Odor	Citrus
Appearance	Dark liquid	Odor Threshold	Not determined
Color	Dark Colored Liquid		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	2.85	
Melting point / freezing point	Not determined	
Boiling Point / Boiling Range	100 °C / 212 °F	
Flash Point	Does not flash	
Evaporation Rate	Slower than butyl acetate	
Flammability (Solid, Gas)	n/a-liquid	
Flammability Limit in Air		
Upper Flammability Limit	Not applicable	
Lower Flammability Limit	Not applicable	
Vapor Pressure	Not available	
Vapor Density	Not available	
Relative Density	Not determined	
Water Solubility	Miscible in water	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Autoignition temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

Other Information

Density	9.996 wt/gal
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10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization	Hazardous polymerization does not occur.
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Conditions to Avoid

Excessive heat.

Incompatible Materials

Strong oxidizers.

Hazardous Decomposition Products

Nitrogen oxides (NOx).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Causes severe eye damage.
Skin Contact	Avoid contact with skin.
Inhalation	Avoid breathing vapors or mists.
Ingestion	Do not taste or swallow.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Zinc sulfate 7733-02-0	= 1710 mg/kg (Rat)	-	-
Organic Acid	= 3000 mg/kg (Rat) = 3 g/kg (Rat)	-	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

Unknown Acute Toxicity 1 % of the mixture consists of ingredient(s) of unknown toxicity.
ATEmix (oral) 7,937.00 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Chemical Name	Partition Coefficient
Organic Acid	-1.72

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated Packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Zinc sulfate 7733-02-0	Toxic

14. TRANSPORT INFORMATION

Note	Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.
DOT	Not regulated
IATA	Not regulated
IMDG Marine Pollutant	This product contains zinc sulfate which is considered a marine pollutant according to the Globally Harmonized System of the Classification and Labelling of Chemicals

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL/NDSL	EINECS/E LINCS	ENCS	IECSC	KECL	PICCS	AICS
Zinc sulfate	X	X	X	X	X	X	X	X
Organic Acid	X	X	X	X	X	X	X	X
Yeast Extract	X	X	X		X	X	X	X

Legend:

- TSCA* - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL* - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS* - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS* - Japan Existing and New Chemical Substances
- IECSC* - China Inventory of Existing Chemical Substances
- KECL* - Korean Existing and Evaluated Chemical Substances
- PICCS* - Philippines Inventory of Chemicals and Chemical Substances
- AICS* - Australian Inventory of Chemical Substances

US Federal Regulations

CERCLA

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Zinc sulfate 7733-02-0	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Zinc sulfate	1000 lb	X		X

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Zinc sulfate 7733-02-0	X	X	X

16. OTHER INFORMATION**NFPA****Health Hazards****Flammability****Instability****Special Hazards****HMIS****Health Hazards****Flammability****Physical hazards****Personal Protection**

Not determined

Not determined

Not determined

Not determined

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Section 15

Disclaimer

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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet