

Precautionary Statements - Response

Immediately call a poison center or doctor/physician
 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 or doctor/physician
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 Wash contaminated clothing before reuse
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Immediately call a poison center or doctor/physician
 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
Sulfuric Acid	7664-93-9	1-3

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

Description of first aid measures

General Advice	Immediately call a poison center or doctor/physician.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.
Skin Contact	Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.
Ingestion	Rinse mouth. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms	Causes severe skin burns and eye damage.
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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

Alcohol resistant foam, carbon dioxide, powder, dispersed water, water spray.

Unsuitable Extinguishing Media None known.

Specific Hazards Arising from the Chemical

In case of fire, sodium oxides can be released.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

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 Cover spills with suitable (non-flammable) absorbent (sand, diatomaceous earth, soil, and other suitable absorbent material); collect in a tightly closed container and dispose of in compliance with Section 13. Dispose of the contained material in accordance with local regulations. After containment, wash the affected area with plenty of water or other suitable detergent.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing and eye/face protection.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep in tightly closed containers and in cool, dry and well ventilated designated places. Open packaging must be carefully closed and kept in a vertical position to avoid release or spill.

Incompatible Materials Keep away from alkaline materials. Strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric Acid 7664-93-9	TWA: 0.2 mg/m ³ thoracic particulate matter	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³	IDLH: 15 mg/m ³ TWA: 1 mg/m ³

Appropriate engineering controls

Engineering Controls Use in a well ventilated area.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Use protective eyewear.

Skin and Body Protection	Use suitable protective gloves and clothing resistant to the product.
Respiratory Protection	If necessary, wear a face respirator.
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	Odorless
Appearance	Colorless liquid	Odor Threshold	Not determined
Color	Not determined		
Property	Values	Remarks • Method	
pH	0.8		
Melting point / freezing point	Not determined		
Boiling point / boiling range	Not determined		
Flash point	Not determined		
Evaporation Rate	Not determined		
Flammability (Solid, Gas)	Liquid-Not applicable		
Flammability Limit in Air			
Upper flammability or explosive limits	Not determined		
Lower flammability or explosive limits	Not determined		
Vapor Pressure	Not determined		
Vapor Density	Not determined		
Relative Density	Not determined		
Water Solubility	Soluble 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		

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.

Conditions to Avoid

Keep out of reach of children.

Incompatible materials

Keep away from alkaline materials. Strong bases.

Hazardous decomposition products

Sulfur oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Avoid contact with eyes.
Skin Contact	Avoid contact with skin.
Inhalation	Do not inhale.
Ingestion	Do not ingest.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric Acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 0.375 mg/L (Rat) 4 h

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Please see section 4 of this SDS for symptoms.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Causes severe skin burns.
Serious eye damage/eye irritation	Causes severe eye damage.
Carcinogenicity	IARC has classified "strong inorganic acid mist containing sulfuric acid" as a Category 1 carcinogen, substance that is carcinogenic to humans. This classification does not apply to liquid forms of sulfuric acid. Inorganic mist is not generated under normal use of this product.

Chemical name	ACGIH	IARC	NTP	OSHA
Sulfuric Acid 7664-93-9	A2	Group 1	Known	X

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
 A2 - Suspected Human Carcinogen
IARC (International Agency for Research on Cancer)
 Group 1 - Carcinogenic to Humans
NTP (National Toxicology Program)
 Known - Known Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
 X - Present

Numerical measures of toxicity

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

Oral LD50	71,333.3333 mg/kg
ATEmix (inhalation-dust/mist)	50.00 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Component Information

Chemical name	Algae/aquatic plants	Fish	Crustacea
Sulfuric Acid 7664-93-9		500: 96 h Brachydanio rerio mg/L LC50 static	

Persistence/Degradability

Not determined.

Bioaccumulation

There is no data for this product.

Mobility

Not determined

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
Sulfuric Acid 7664-93-9	Toxic Corrosive

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

Not regulated

15. REGULATORY INFORMATION

International Inventories

Chemical name	TSCA	TSCA Inventory Status	DSL/NDL	EINECS/ELI NCS	ENCS	IECSC	KECL	PICCS	AICS
Sulfuric Acid	X	ACTIVE	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)
Sulfuric Acid 7664-93-9	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ

SARA 313

Chemical name	CAS No	Weight-%	SARA 313 - Threshold Values %
Sulfuric Acid - 7664-93-9	7664-93-9	1-3	1.0

CWA (Clean Water Act)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric Acid	1000 lb			X

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical name	California Proposition 65
Sulfuric Acid - 7664-93-9	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sulfuric Acid 7664-93-9	X	X	X

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards	Flammability	Instability	Special Hazards
	1	0	0	Not determined
<u>HMIS</u>	Health Hazards	Flammability	Physical hazards	Personal Protection
	1	0	0	Not determined

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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