

Safety Data Sheet

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation: Sulfuric Acid, 59.5% w/w

Product Number: CS103200

Other Identifying Product Numbers: S-1032, S-1032-1, S-1032-200L

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company: Reagents Inc.

Address: 4746 Sweden Road
Charlotte, NC 28224 USA

Telephone: 800-732-8484

1.4. Emergency Telephone Number (24 hr)

CHEMTREC (USA) 800-424-9300

CHEMTREC (International) 1+ 703-527-3887

SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture (in accordance with OSHA HCS 29 CFR 1910.1200)

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

Hazard Class	Category	Hazard	
		Statement	Precautionary Statements
Skin Corrosion / Irritation	Category 1	H314	P260, P264, P280, P301+P330+P331, P303+P361+P353, P363, P304+P340, P310, P321, P305+P351+P338, P405, P501
Eye Damage / Irritation	Category 1	H318	P280, P305+P351+P338, P310
Corrosive to Metals	Category 1	H290	P234, P390, P406

2.2. GHS Label Elements

Pictograms:



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Signal Word: **Danger**

Hazard Statements:

Hazard Number	Hazard Statement
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

Precautionary Statements:

Precautionary Number	Precautionary Statement
P234	Keep only in original container.
P260	Do not breathe dust, fumes or mist.
P264	Wash arms, hands and face thoroughly after handling.
P280	Wear protective gloves and eye protection.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with 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.
P310	Immediately call a POISON CENTER or physician.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P406	Store in corrosive resistant container with a resistant inner liner.

2.3. WHMIS Classification

WHMIS classification is not included based on the recommended option (Option 4) found in the Canada Gazette Part II, Vol. 149, No.3, page 458

2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Substance or Mixture

Chemical Name	Formula	Molecular Weight	CAS Number	Weight%
Sulfuric Acid	H ₂ SO ₄	98.07 g/mol	7664-93-9	59.08%
Water	H ₂ O	18.01 g/mol	7732-18-5	40.92%



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SECTION 4: First-Aid Measures

4.1. General First Aid Information

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Eye contact causes tissue damage and blindness.

Inhalation: Not expected to require first aid. If necessary, remove to fresh air.

Skin Contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Skin contact causes burns, blistering, local necrosis, and membrane ulceration. Burns may be 2nd or 3rd degree.

Ingestion: IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Do not induce vomiting. Give large quantity of water. Call a physician immediately.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Corrosive liquid. Causes severe burns. Eye contact causes tissue damage and blindness. Ingestion causes corrosion of the mucosa of the mouth, throat and esophagus with stomach discomfort and pain. If ingested, dilute with large quantity of water. Do not induce vomiting. Call a physician. Wash areas of contact with plenty of water for at least 15 minutes. If possible, wipe off areas of contact with dry cloth before flushing with water, as water contact will generate heat. **EYE CONTACT:** Eye contact causes tissue damage and blindness. **SKIN CONTACT:** Skin contact causes burns, blistering, local necrosis, and membrane ulceration. Burns may be 2nd or 3rd degree. **CHRONIC EFFECTS / CARCINOGENICITY:** May affect the skin, liver, kidneys and blood.

4.3. Medical Attention or Special Treatment Needed

Immediately call a POISON CENTER or physician.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Dry chemical, foam, or carbon dioxide. Reacts with water producing heat and toxic fumes.

5.2. Specific Hazards Arising from the Substance or Mixture

Not combustible. Strong dehydrating agent, which may cause ignition of finely divided materials on contact. Reaction with metals may produce hydrogen gas. Oxides of sulfur may be produced in fire.

5.3. Special Protective Equipment for Firefighters

Wear special protective clothing and positive pressure self-contained breathing apparatus. Butyl rubber, natural rubber, Neoprene, polyethylene, polyvinyl chloride, Teflon, Viton, or Saranex barrier recommended.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye protection.

6.2. Cleanup and Containment Methods and Materials

Keep water away from release. Stop or control the leak, if this can be done without undue risk. Control runoff and isolate discharged material for proper disposal.



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SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

Store in corrosive resistant container with a resistant inner liner. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Do not mix with bases. Contact with water will generate heat.

SECTION 8: Exposure Controls / Personal Protection

8.1. Control Parameters

Chemical Name	Limit Type	Country	Exposure Limit	Information Source
Sulfuric Acid (7664-93-9)	TWA	USA	1 mg/m ³ TWA	U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)
Sulfuric Acid (7664-93-9)	TLV-TWA	USA	0.2 mg/m ³ TWA (thoracic fraction)	ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

8.2. Exposure Controls

Engineering Controls: No specific controls are needed. Normal room ventilation is adequate.

Respiratory Protection: Normal room ventilation is adequate.

Skin Protection: Wear protective gloves and eye protection. Chemical resistant gloves.

Eye Protection: Wear protective gloves and eye protection. Safety glasses or goggles.

8.3. Personal Protective Equipment

Wear protective gloves and eye protection. Normal room ventilation is adequate. Chemical resistant gloves. Safety glasses or goggles.

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SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Appearance:	Colorless to slightly tan liquid.
Physical State:	Liquid
Odor:	Odorless
Odor Threshold:	Not applicable.
pH:	< 1
Melting/Freezing Point:	Approximately -79°C
Initial Boiling Point /Range:	Approximately 135°C -
Flash Point:	Not applicable.
Evaporation Rate:	Data not available.
Flammability:	Not flammable.
Flammability/Explosive Limits:	Data not available.
Vapor Pressure:	< 0.001 mm Hg @25°C
Vapor Density:	3.4
Relative Density:	1.50
Solubility:	Miscible
Partition Coefficient (n-Octano/Water):	Data not available.
Auto-Ignition Temperature:	Not applicable.
Decomposition Temperature:	Data not available.
Viscosity:	Data not available.
Explosive Properties:	Data not available.
Oxidizing Properties:	Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Keep only in original container. Organics, chlorates, carbides, fulminates, picrates, alkalines, reducing agents, nitrates, acetic acid, oxidizing agents,

10.4. Hazardous Decomposition Products

Will not occur.



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SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Not applicable.

Acute Toxicity - Dermal Exposure:

Not applicable.

Acute Toxicity - Inhalation Exposure:

Not applicable.

Acute Toxicity - Other Information:

LD50, Oral, Rat: 2140 mg/kg (Sulfuric Acid), details of toxic effects not reported other than lethal dose value.

LC50, Inhalation, Rat: (Sulfuric Acid) 510 mg/m³/2H, no toxic effect noted.

Skin Corrosion and Irritation:

Causes severe skin burns and eye damage. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water. If possible, wipe off areas of contact with dry cloth before flushing with water). IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

Serious Eye Damage and Irritation:

Causes serious eye damage. Wear protective gloves and eye protection. 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 physician.

Respiratory Sensitization:

Not applicable.

Skin Sensitization:

Not applicable.

Germ Cell Mutagenicity:

Not applicable.

Carcinogenicity:

Not applicable.

Reproductive Toxicity:

Not applicable.

Specific Target Organ Toxicity from Single Exposure:

Not applicable.

Specific Target Organ Toxicity from Repeated Exposure:

Not applicable.

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Aspiration Hazard:

Not applicable.

Additional Toxicology Information:

Data not available.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Not applicable.

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in Soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.

SECTION 14: Transportation Information

14.1. Transportation by Land - Department of Transportation (DOT, United States of America)

UN Number: UN1830

Proper Shipping Name: Sulphuric Acid Solution

Hazard Class: 8

Packing Group: II

Hazard Placard Labels:



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14.2. Transportation by Air - International Air Transport Association (IATA)

UN Number: UN1830
Proper Shipping Name: Sulphuric Acid Solution
Hazard Class: 8
Packing Group: II
Hazard Placard Labels:



SECTION 15: Regulatory Information

15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Sulfuric Acid (CAS # 7664-93-9): 1000 lb EPCRA RQ

Sulfuric Acid (CAS # 7664-93-9): 1000 lb TPQ

15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Sulfuric Acid (CAS # 7664-93-9): 1000 lb final RQ; 454 kg final RQ

15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Sulfuric Acid (CAS # 7664-93-9): 1.0 % de minimis concentration (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

15.5. Massachusetts Right-to-Know Substance List

Sulfuric Acid (CAS # 7664-93-9): Extraordinarily hazardous

15.6. Pennsylvania Right-to-Know Hazardous Substances

Sulfuric Acid (CAS # 7664-93-9): Environmental hazard

Sulfuric Acid (CAS # 7664-93-9): Present

Water (CAS # 7732-18-5): Present

15.7. New Jersey Worker and Community Right-to-Know Components

Sulfuric Acid (CAS # 7664-93-9): carcinogen; corrosive; reactive - second degree

Sulfuric Acid (CAS # 7664-93-9): sn 1761

Sulfuric Acid (CAS # 7664-93-9): SN 1761 TPQ: 500 lb

15.8. California Proposition 65

Sulfuric Acid (CAS # 7664-93-9): carcinogen, initial date 3/14/03



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15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Sulfuric Acid (CAS # 7664-93-9): Present

Water (CAS # 7732-18-5): Present

15.10. United States of America Toxic Substances Control Act (TSCA) List

Sulfuric Acid (CAS # 7664-93-9): Present

Water (CAS # 7732-18-5): Present

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS),

European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Not listed.

SECTION 16: Other Information

16.1. Full Text of Hazard Statements and Precautionary Statements

May be corrosive to metals. Causes severe skin burns and eye damage. Causes serious eye damage.

Keep only in original container. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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 physician. Specific treatment (Wash areas of contact with water. If possible, wipe off areas of contact with dry cloth before flushing with water). Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.

Store locked up. Store in corrosive resistant container with a resistant inner liner.

Dispose of contents in accordance with local, state, federal and international regulations.

16.2. Miscellaneous Hazard Classes

Canadian Carcinogenicity Hazard Class: Not Applicable.

Physical Hazards Not Otherwise Classified (PHNOC): Not Applicable.

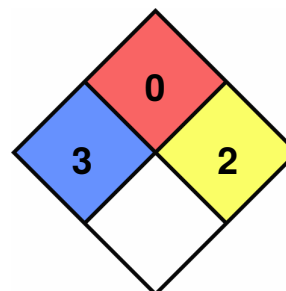
Health Hazards Not Otherwise Classified (HHNOC): Not Applicable.

Biohazardous Infectious Materials Hazard Class: Not Applicable.

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16.3. National Fire Protection Association (NFPA) Rating

Health: 3
Flammability: 0
Reactivity: 2
Special Hazard:



16.4. Document Revision

Last Revision Date: 5/25/2018

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and REAGENTS, INC. assumes no legal responsibility or liability whatsoever resulting from its use.