

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Sulfuric Acid 96%
CAS number	7664-93-9
Synonyms	Sulphuric acid; Battery acid; Hydrogen sulfate

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

Identified uses	Laboratory chemicals.
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1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin Corrosion/Irritation	Category 1
Serious Eye Damage/Eye Irritation	Category 1
Specific Target Organ Toxicity (single exposure) Target Organ(s) - Respiratory system	Category 3

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

Causes severe skin burns and eye damage.
May cause respiratory irritation.

Precautionary statements

Prevention: Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands, and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area.

Response: Immediately call a POISON CENTER or doctor/physician.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

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

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.

Storage: Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal: Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

WARNING: Cancer - <https://www.p65warnings.ca.gov/>.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Sulfuric acid	Sulphuric acid; Hydrogen sulfate	7664-93-9	96%
Water	Aqua; H ₂ O	7732-18-5	4%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	Remove to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
In case of skin contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
If swallowed	Rinse mouth. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue, and danger of perforation.

4.3 Indication of any immediate medical attention and special treatment needed

Immediate medical attention is required. Remove and isolate contaminated clothing and shoes. Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.
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Unsuitable extinguishing media	Do not use water.
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5.2 Specific hazards arising from the substance or mixture

Corrosive material. Reacts violently with water. Reaction with water may generate much heat which will increase the concentration of fumes in the air. Contact with metals may evolve flammable hydrogen gas. Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.
Hazardous Combustion Products: Hydrogen. Sulfur oxides.

5.3 Special 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.

5.4 Further information

Flash Point No information available.

Autoignition Temperature No information available.

Explosion limits

Upper No data available.

Lower No data available.

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
3	0	2	W

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Wear self-contained breathing apparatus and protective suit. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Avoid contact with skin, eyes, or clothing.

6.2 Environmental precautions

Avoid release to the environment. See Section 12 for additional Ecological Information.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. After cleaning, flush away traces with water.

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Handle product only in closed system or provide appropriate exhaust ventilation. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed, seek immediate medical assistance.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep containers tightly closed in a dry, cool, and well-ventilated place. Corrosives area.

Incompatibilities

Strong oxidizing agents. Combustible material. Bases. Organic materials. Reducing agents. Finely powdered metals. Peroxides.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Sulfuric acid	(Vacated) TWA	1 mg/m3
	TWA	1 mg/m3

US. ACGIH Threshold Limit Values

Component	Type	Value
Sulfuric acid	TWA	0.2 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Sulfuric acid	IDLH	15 mg/m3
	TWA	1 mg/m3

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Handle in a place equipped with local exhaust ventilation. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Clear, oily liquid
Odor	Odorless
Odor Threshold	No information available
pH	0.3 (1N aq. sol)
Melting Point/Range	10 °C / 50 °F
Boiling Point/Range	290 °C / 554 °F
Evaporation Rate	No information available
Flammability (solid)	Not applicable
Flammability or explosive limit	No data available
Upper	
Lower	
Vapor Pressure	1 mmHg @ 145.8°C (295°F)
Vapor Density	No information available
Density	1.84 g/cm ³ at 25 °C (77 °F)
Solubility	100 g/100 ml water @ 100°C (212°F)
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	No information available
Decomposition Temp	340 °C
Viscosity	21mPa.s @ 25 °C
Molecular Formula	H ₂ SO ₄
Molecular Weight	98.08 g/mol
VOC Content(%)	No information available
Oxidizing properties	None

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Contact with metals may evolve flammable hydrogen gas. Reacts violently with water.

10.2 Chemical stability

Water reactive. Hygroscopic.

10.3 Possibility of hazardous reactions

Hazardous polymerization does not occur. Vigorous reactions occur when in contact with incompatible materials.

10.4 Conditions to avoid

Incompatible products. Excess heat. Exposure to moist air or water.

10.5 Incompatible materials

Strong oxidizing agents. Combustible material. Bases. Organic materials. Reducing agents. Finely powdered metals. Peroxides.

10.6 Hazardous decomposition products

Hydrogen, Sulfur oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sulfuric acid	2140 mg/kg (Rat)	-	0.375 mg/L (Rat) 4h

Skin corrosion/irritation

Causes severe burns by all exposure routes.

Serious eye damage/eye irritation

Causes severe burns by all exposure routes.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Sulfuric acid	7664-93-9	Group 1	Known	A2	X	A2

Specific target organ toxicity - single exposure

Respiratory system.

Specific target organ toxicity - repeated exposure

None known.

Reproductive toxicity

No information available.

Chronic effects

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue, and danger of perforation.

11.2 Additional Information

The toxicological properties have not been fully investigated.

SECTION 12: Ecological information**12.1 Toxicity**

Do not empty into drains. Large amounts will affect pH and harm aquatic organisms.

Product		Species	Test Results
Sulfuric acid	LC50	Brachydanio rerio	> 500 mg/L/96h static
	EC50	Water Flea	29 mg/L/24h

12.2 Persistence and degradability

Miscible with water. Persistence is unlikely based on information available.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

Will likely be mobile in the environment due to its water solubility.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN-no	UN1830
Proper Shipping Name	SULFURIC ACID
Hazard Class	8
Packing Group	II

IMDG

UN-no	UN1830
Proper Shipping Name	SULFURIC ACID
Hazard Class	8
Packing Group	II

IATA

UN-no	UN1830
Proper Shipping Name	SULFURIC ACID
Hazard Class	8
Packing Group	II

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)
Listed, Sulfuric acid (CAS #7664-93-9), RQ: 1000 lb.

SARA 304 Emergency release notification
Listed, Sulfuric acid (CAS #7664-93-9), RQ: 1000 lb.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance
Listed, Sulfuric acid (CAS #7664-93-9), TPQ: 1000 lb.

SARA 311/312 Hazardous

See Section 2 for more information.

SARA 313 (TRI reporting)

Listed, Sulfuric acid (CAS #7664-93-9).

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Water Act (CWA)

Listed, Sulfuric acid (CAS #7664-93-9), RQ: 1000 lb.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations

US. Massachusetts RTK - Substance List

Listed, Sulfuric acid (CAS #7664-93-9).

US. New Jersey Worker and Community Right-to-Know Act

Listed, Sulfuric acid (CAS #7664-93-9).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed, Sulfuric acid (CAS #7664-93-9).

California Proposition 65

Listed, Sulfuric acid (CAS #7664-93-9).

SECTION 16: Other information

Issue date: 11/08/2019

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Revision 2: 11/13/2024

SECTION 17: Disclaimer

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.