

# SAFETY DATA SHEET

## 1. Identification

**Product identifier** Sulfuric Acid 93%  
**Other means of identification** None.  
**Recommended use** Not available.  
**Recommended restrictions** None known.  
**Manufacturer/Importer/Supplier/Distributor information**  
**Manufacturer**

**Company name** Thatcher Company of California, Inc.  
**Address** 8625 Unsworth Avenue  
Sacramento, CA 95828  
United States  
**Telephone** (916) 389-2520  
**E-mail** inquiries@tchem.com  
**Emergency phone number** 800 (424)-9300

## 2. Hazard(s) identification

**Physical hazards** Not classified.  
**Health hazards** Acute toxicity, inhalation Category 2  
Skin corrosion/irritation Category 1  
Serious eye damage/eye irritation Category 1  
Carcinogenicity Category 1A  
Specific target organ toxicity, single exposure Category 3 respiratory tract irritation  
**Environmental hazards** Hazardous to the aquatic environment, long-term hazard Category 3  
**OSHA defined hazards** Not classified.  
**Label elements**



**Signal word** Danger

**Hazard statement** Causes severe skin burns and eye damage. Causes serious eye damage. Fatal if inhaled. May cause respiratory irritation. May cause cancer. Harmful to aquatic life with long lasting effects.

### Precautionary statement

#### Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection.

#### Response

If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. 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/doctor. Specific treatment is urgent (see this label). Wash contaminated clothing before reuse.

#### Storage

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

#### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** 7% of the mixture consists of component(s) of unknown acute inhalation toxicity. 7% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Sulfuric acid		7664-93-9	93
Other components below reportable levels			7

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Most important symptoms/effects, acute and delayed</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Powder. Foam. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Not applicable.
<b>Special protective equipment and precautions for firefighters</b>	Wear suitable protective equipment.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Do not breathe vapors or spray mist. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	This product is miscible in water. Should not be released into the environment. Stop the flow of material, if this is without risk. Dike far ahead of spill for later disposal. Prevent product from entering drains. Following product recovery, flush area with water.
<b>Environmental precautions</b>	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

## 7. Handling and storage

### Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

### Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

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

Material	Type	Value
Sulfuric acid	PEL	1 mg/m3
Components	Type	Value

Sulfuric acid (CAS 7664-93-9)	PEL	1 mg/m3
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#### US. ACGIH Threshold Limit Values

Material	Type	Value	Form
Sulfuric acid	TWA	0.2 mg/m3	Thoracic fraction.
Components	Type	Value	Form

Sulfuric acid (CAS 7664-93-9)	TWA	0.2 mg/m3	Thoracic fraction.
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#### US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value
Sulfuric acid	TWA	1 mg/m3
Components	Type	Value

Sulfuric acid (CAS 7664-93-9)	TWA	1 mg/m3
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### Biological limit values

No biological exposure limits noted for the ingredient(s).

### Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Chemical respirator with organic vapor cartridge and full facepiece.

#### Skin protection

##### Hand protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

##### Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

#### Respiratory protection

Chemical respirator with organic vapor cartridge and full facepiece.

#### Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

### General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

**Physical state** Liquid.

**Form** Liquid.

**Color** Not available.

**Odor** Not available.

**Odor threshold** Not available.

<b>pH</b>	0.3 - 2.1 1 N sol= 0.3, 0.1 N sol= 1.2, 0.01 N sol= 2.1
<b>Melting point/freezing point</b>	50.56 °F (10.31 °C) 50.56 °F (10.31 °C) estimated
<b>Initial boiling point and boiling range</b>	554 °F (290 °C) 554 °F (290 °C) estimated
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	0.000008 kPa at 25 °C 0.00007 hPa estimated
<b>Vapor density</b>	3.4
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Miscible
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	1.80 g/cm3 1.80 g/cm3 estimated
<b>Dynamic viscosity</b>	21 mPa.s
<b>Explosive properties</b>	Not explosive.
<b>Kinematic viscosity</b>	11.67 mm²/s estimated
<b>Molecular formula</b>	H2-O4-S
<b>Molecular weight</b>	98.08 g/mol
<b>Oxidizing properties</b>	Not oxidizing.
<b>Percent volatile</b>	7 % estimated
<b>Specific gravity</b>	1.8 1.8 estimated

## 10. Stability and reactivity

<b>Reactivity</b>	Reacts violently with strong alkaline substances. This product may react with reducing agents.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Do not mix with other chemicals. Contact with incompatible materials.
<b>Incompatible materials</b>	Bases. Reducing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Fatal if inhaled.
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<b>Skin contact</b>	Causes severe skin burns.
<b>Eye contact</b>	Causes serious eye damage.
<b>Ingestion</b>	Causes digestive tract burns.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.

#### Information on toxicological effects

**Acute toxicity** Fatal if inhaled. May cause respiratory irritation.

Product	Species	Test Results
Sulfuric acid		
<b><u>Acute</u></b>		
<b>Inhalation</b>		
LC50	Guinea pig	0.018 mg/l, 8 Hours
	Rat	347 mg/l, 1 Hours
<b>Oral</b>		
LD50	Rat	2140 mg/kg
Components	Species	Test Results

Sulfuric acid (CAS 7664-93-9)

#### **Acute**

##### **Inhalation**

LC50	Guinea pig	0.018 mg/l, 8 Hours
	Rat	347 mg/l, 1 Hours

##### **Oral**

LD50	Rat	2140 mg/kg
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\* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Causes severe skin burns and eye damage.

**Serious eye damage/eye irritation** Causes serious eye damage.

#### **Respiratory or skin sensitization**

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** May cause cancer.

#### **IARC Monographs. Overall Evaluation of Carcinogenicity**

Sulfuric acid (CAS 7664-93-9) 1 Carcinogenic to humans.

#### **US. National Toxicology Program (NTP) Report on Carcinogens**

Sulfuric acid (CAS 7664-93-9) Known To Be Human Carcinogen.

#### **US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

## **12. Ecological information**

**Ecotoxicity** Harmful to aquatic life with long lasting effects. Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

Components	Species	Test Results
Sulfuric acid (CAS 7664-93-9)		
Aquatic		
Fish	LC50	Western mosquitofish (Gambusia affinis) 42 mg/l, 96 hours
* Estimates for product may be based on additional component data not shown.		
Persistence and degradability	No data is available on the degradability of this product.	
Bioaccumulative potential	No data available.	
Mobility in soil	No data available.	
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	
13. Disposal considerations		
Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.	
Local disposal regulations	Dispose in accordance with all applicable regulations.	
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.	
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).	
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.	
14. Transport information		
DOT		
UN number	UN1830	
UN proper shipping name	Sulfuric acid with more than 51 percent acid, solution (Sulfuric acid RQ = 1075 LBS)	
Transport hazard class(es)		
Class	8	
Subsidiary risk	-	
Label(s)	8	
Packing group	II	
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.	
Special provisions	A3, A7, B3, B83, B84, IB2, N34, T8, TP2, TP12	
Packaging exceptions	154	
Packaging non bulk	202	
Packaging bulk	242	
DOT BULK		
BULK		
UN number	UN1830	
UN proper shipping name	Sulfuric acid with more than 51 percent acid, solution (Sulfuric acid RQ = 1075 LBS)	
Transport hazard class(es)		
Class	8	
Label(s)	8	
Packing group	II	
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.	
Special provisions	A3, A7, B3, B83, B84, IB2, N34, T8, TP2, TP12	
Packaging exceptions	154	
Packaging non bulk	202	
Packaging bulk	242	
IATA		
UN number	UN1830	
UN proper shipping name	Sulphuric acid with more than 51% acid solution (Sulfuric acid)	
Transport hazard class(es)		
Class	8	

Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	8L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

#### IMDG

UN number	UN1830
UN proper shipping name	SULPHURIC ACID with more than 51% acid solution (Sulfuric acid)
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not established.

DOT; DOT Bulk packaging type



IATA; IMDG



## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

#### CERCLA Hazardous Substance List (40 CFR 302.4)

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

#### SARA 304 Emergency release notification

Sulfuric acid (CAS 7664-93-9) 1000 LBS

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - Yes  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
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Sulfuric acid	7664-93-9	1000	1000 lbs		
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**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Sulfuric acid	7664-93-9	93

**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)**

Sulfuric acid (CAS 7664-93-9)

**Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)** Hazardous substance

**Safe Drinking Water Act (SDWA)** Not regulated.

**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

Sulfuric acid (CAS 7664-93-9) 6552

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

Sulfuric acid (CAS 7664-93-9) 20 %WV

**DEA Exempt Chemical Mixtures Code Number**

Sulfuric acid (CAS 7664-93-9) 6552

**Food and Drug Administration (FDA)** Total food additive  
Direct food additive  
GRAS food additive

**US state regulations****US - New Jersey RTK - Substances: Listed substance**

Sulfuric acid (CAS 7664-93-9)

**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Sulfuric acid (CAS 7664-93-9)

**US. Massachusetts RTK - Substance List**

Sulfuric acid (CAS 7664-93-9)

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

Sulfuric acid (CAS 7664-93-9)

**US. Pennsylvania RTK - Hazardous Substances**

Sulfuric acid (CAS 7664-93-9)

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

Sulfuric acid (CAS 7664-93-9)

**US. Rhode Island RTK**

Sulfuric acid (CAS 7664-93-9)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer.



**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Sulfuric acid (CAS 7664-93-9)

Listed: March 14, 2003

**International Inventories**

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

Issue date	01-10-2019
Revision date	01-11-2019
Version #	02
NFPA ratings	Health: 4 Flammability: 0 Instability: 0

**NFPA ratings****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.

**Revision Information**

Product and Company Identification: Product and Company Identification