

**MATERIAL SAFETY DATA SHEET**

Product Name: Sulphuric acid

CAS No.: 7664-93-9

Version: 0

**1. Identification**

**Product Code** : 90256, 90734, 90570  
**Company Name** : Advent Chembio Private Limited  
**Address** : W-288, MIDC, TTC INDUSTRIAL AREA, THANE-BELAPUR ROAD, RABALE, NAVI MUMBAI - 400 701.  
**E-mail** : [info@adventchembio.com](mailto:info@adventchembio.com)  
**WEBSITE** : [www.adventchembio.com](http://www.adventchembio.com)  
**Company Phone Number** : 022-27690837

**2. Composition/Information on Ingredients**

Ingredient	CAS No	Percent
SULPHURIC ACID	7664-93-9	90-100%

**3. Hazards Identification****Hazard classification****Physical hazards**

Corrosive to metals : Category 1

**Health hazards**

Skin corrosion/irritation : Category 1

Serious eye damage/eye irritation : Category 1

Carcinogenicity : Category 1

Specific target organ toxicity - single exposure : Category 3

**Environmental hazards**

Acute hazards to the aquatic environment : Category 3

**Labels elements****Hazard symbol****Signal word** : Danger**Hazard statement** :  
May be corrosive to metals.  
Causes severe skin burns and eye damage.  
May cause respiratory irritation.  
May cause cancer if inhaled.  
Harmful to aquatic life.**Precautionary statement**

**MATERIAL SAFETY DATA SHEET****Product Name:** Sulphuric acid**CAS No.:** 7664-93-9**Version:** 0

- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep only in original container. Wash thoroughly after handling. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.
- Response** : IF exposed or concerned: Get medical advice/attention. Absorb spillage to prevent material damage. Immediately call a POISON CENTER or doctor/physician. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/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 INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Storage** : Store locked up. Store in corrosive resistant container with a resistant inner liner. Store in a well-ventilated place. Keep container tightly closed.
- Disposal** : Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
- Other hazards which do not result in GHS classification** : None.

**4. First Aid Measures**

- General information** : Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.
- Ingestion** : Call a physician or poison control center immediately. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs .
- Inhalation** : Move to fresh air. Call a physician or poison control center immediately. Apply artificial respiration if victim is not breathing. If breathing is difficult, give oxygen.
- Skin contact** : Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
- Eye contact** : Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. In case of irritation from airborne exposure, move to fresh air. Get medical attention immediately.
- Most important symptoms/effects, acute and delayed** : Corrosive to skin and eyes.

**MATERIAL SAFETY DATA SHEET****Product Name:** Sulphuric acid**CAS No.:** 7664-93-9**Version:** 0

**Indication of immediate medical attention and special treatment needed** : Treat symptomatically. Symptoms may be delayed.

**5. Fire fighting measures**

**General fire hazards** : In case of fire and/or explosion do not breathe fumes.  
**Suitable (and unsuitable) extinguishing media**

**Suitable extinguishing media** : Foam, carbon dioxide or dry powder.

**Unsuitable extinguishing media** : Do not use water as an extinguisher

**Specific hazards arising from the chemical** : Fire may produce irritating, corrosive and/or toxic gases.

**Special protective equipment and precautions for firefighters**

**Special fire fighting procedures** : Move containers from fire area if you can do so without risk. Fight fire from a protected location. Use water SPRAY only to cool containers! Do not put water on leaked material. Cool containers exposed to flames with water until well after the fire is out.

**Special protective equipment for fire-fighters** : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental Release Measures**

**Personal precautions, protective equipment and emergency procedures** : Keep unauthorized personnel away. Use personal protective equipment. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

**Methods and material for containment and cleaning up** : Neutralize spill area and washings with soda ash or lime. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

**Notification Procedures** : Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.

**Environmental precautions** : Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

# MATERIAL SAFETY DATA SHEET

**Product Name:** Sulphuric acid

**CAS No.:** 7664-93-9

**Version:** 0

## 7. Handling and Storage

- Precautions for safe handling** : Do not get in eyes, on skin, on clothing. Do not taste or swallow. Wash hands thoroughly after handling. Do not eat, drink or smoke when using the product. Use caution when adding this material to water. Add material slowly when mixing with water. Do not add water to the material; instead, add the material to the water. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required.
- Conditions for safe storage, including any incompatibilities** : Do not store in metal containers. Keep in a cool, well-ventilated place. Keep container tightly closed. Store in a dry place .

## 8. Exposure Controls Personal Protection

### Control parameters

### Occupational exposure limits

Chemical identity	Type	Exposure Limit values	Source
SULFURIC ACID - Thoracic fraction	TWA	0.2 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values (2011)
SULFURIC ACID	REL	1 mg/m <sup>3</sup>	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	1 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	1 mg/m <sup>3</sup>	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

**Appropriate engineering controls** : No data available.

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

- General information** : 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. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.
- Eye/face protection** : Wear safety glasses with side shields (or goggles) and a face shield.
- Hand protection** : Chemical resistant gloves.
- Other** : Wear suitable protective clothing and gloves.
- Respiratory protection** : In case of inadequate ventilation use suitable respirator. Chemical respirator with acid gas cartridge.
- Hygiene measures** : Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material

**MATERIAL SAFETY DATA SHEET****Product Name:** Sulphuric acid**CAS No.:** 7664-93-9**Version:** 0

and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

**9. Physical and Chemical Properties**

<b>Appearance</b>	:	Colorless Liquid.
<b>Odor</b>	:	Odorless
<b>pH</b>	:	0.3 (1 N aqueous solution)
<b>Melting point/freezing point</b>	:	3 °C
<b>Initial boiling point and boiling range</b>	:	337 °C
<b>Flash Point</b>	:	Not applicable
<b>Vapor pressure</b>	:	No data available.
<b>Vapor density</b>	:	No data available.
<b>Relative density</b>	:	1.84 (20 °C)
<b>Solubility in water</b>	:	Miscible with water.
<b>Solubility (other)</b>	:	No data available.
<b>Formula</b>	:	H <sub>2</sub> SO <sub>4</sub>
<b>Molecular Weight</b>	:	98.08 g/mol

**10. Stability and Reactivity**

<b>Reactivity</b>	:	Reacts violently with strong alkaline substances.
<b>Chemical stability</b>	:	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	:	Hazardous polymerization does not occur. Material reacts with water.
<b>Conditions to avoid</b>	:	Moisture. Heat. Contact with incompatible materials.
<b>Incompatible materials</b>	:	Water. Cyanides. Strong oxidizing agents. Strong reducing agents. Metals. Halogens. Organic compounds. Potassium .
<b>Hazardous decomposition products</b>	:	Oxides of sulfur.

**11. Toxicological Information****Information on likely routes of exposure**

<b>Ingestion</b>	:	May cause burns of the gastrointestinal tract if swallowed.
<b>Inhalation</b>	:	May cause damage to mucous membranes in nose, throat, lungs and bronchial system.
<b>Skin contact</b>	:	Causes severe skin burns.
<b>Eye contact</b>	:	Causes serious eye damage.

**Information on toxicological effects****Acute toxicity (list all possible routes of exposure)**

## MATERIAL SAFETY DATA SHEET

**Product Name:** Sulphuric acid

**CAS No.:** 7664-93-9

**Version:** 0

<b>Oral Product</b>	:	No data available.
<b>Dermal Product</b>	:	No data available.
<b>Inhalation Product</b>	:	No data available.
<b>Specified substance(s): SULFURIC ACID</b>	:	LC 50 (Guinea pig, 8 h): 0.03 mg/l LC 50 (Rat, 1 h): 347 mg/l
<b>Repeated dose toxicity Product</b>	:	No data available.
<b>Skin corrosion/irritation Product</b>	:	Causes severe skin burns.
<b>Serious eye damage/eye irritation Product</b>	:	Causes serious eye damage.
<b>Respiratory or skin sensitization Product</b>	:	Not a skin sensitizer.
<b>Carcinogenicity Product</b>	:	May cause cancer.
<b>IARC Monographs on the Evaluation of Carcinogenic Risks to Humans DIOXANE</b>	:	SULFURIC ACID: Overall Evaluation: 1. Carcinogenic to humans.
<b>US. National Toxicology Program (NTP) Report on Carcinogens DIOXANE</b>	:	SULFURIC ACID: Known To Be Human Carcinogen.
<b>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	:	No carcinogenic components identified
<b>Germ cell mutagenicity</b>	:	
<b>In vitro Product</b>	:	No mutagenic components identified
<b>In vivo Product</b>	:	No mutagenic components identified
<b>Reproductive toxicity Product</b>	:	No components toxic to reproduction
<b>Specific target organ toxicity - single exposure Product</b>	:	Respiratory tract irritation.
<b>Specific target organ toxicity - repeated exposure Product</b>	:	None known.
<b>Aspiration hazard Product</b>	:	Not classified.
<b>Other effects</b>	:	None known.

### 12. Ecological Information

#### Ecotoxicity

##### Acute hazards to the aquatic environment :

<b>Fish Product</b>	:	No data available
<b>Specified substance(s): SULFURIC ACID</b>	:	LC 50 (Starry, european flounder (Platichthys flesus), 48 h): 100 - 330 mg/l Mortality LC 50 (Western mosquitofish (Gambusia affinis), 96 h): 42 mg/l Mortality
<b>Aquatic invertebrates Product</b>	:	No data available.
<b>Specified substance(s): SULFURIC ACID</b>	:	LC 50 (Common shrimp, sand shrimp (Crangon crangon), 48 h):

# MATERIAL SAFETY DATA SHEET

**Product Name:** Sulphuric acid

**CAS No.:** 7664-93-9

**Version:** 0

ACID 70 - 80 mg/l Mortality  
 LC 50 (Aesop shrimp (Pandalus montagui), 48 h): 42.5 mg/l Mortality

**Chronic hazards to the aquatic environment :**

- Fish Product** : No data available.
- Aquatic invertebrates Product** : No data available.
- Toxicity to Aquatic Plants Product:** : No data available.
- Persistence and degradability**
- Biodegradation Product** : The product is not expected to be biodegradable.
- BOD/COD ratio Product** : No data available.
- Bioaccumulative potential**
- Bioconcentration factor (BCF) Product** : No data available on bioaccumulation.
- Partition coefficient n-octanol / water (log Kow) Product** : No data available.
- Mobility in soil** : The product is water soluble and may spread in water systems.
- Other adverse effects** : The product contains a substance which is harmful to aquatic organisms. The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

**13. Disposal consideration**

- Disposal instructions** : Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
- Contaminated packaging** : Since emptied containers retain product residue, follow label warnings even after container is emptied.

**14. Transport Information**

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
<b>DOT</b>	UN 1830	Sulfuric acid	8	II	No
<b>IMDG</b>	UN 1830	Sulfuric acid	8	II	No
<b>IATA</b>	UN 1830	Sulfuric acid	8	II	No

**MATERIAL SAFETY DATA SHEET**

Product Name: Sulphuric acid

CAS No.: 7664-93-9

Version: 0

**15. Regulatory Information**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture  
No Data Available.

**16. Other Information****NFPA Hazard ID**

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe  
W: Water –Reactive

**Issue Date :01/08/2014****Version : 0**

***Disclaimer: This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. ADVENT CHEMBIO PRIVATE LIMITED makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the technical instructor in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of ADVENT CHEMBIO PRIVATE LIMITED and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).***