

SAFETY DATA SHEET(SDS)

1. Product and company Information

Product Name: SULFURIC ACID			
Product Number:			
Names, addresses, and phone numbers of the manufacturer or supplier :	ADD	Jian Shun Chemical Co.,Ltd.	
	Address	No.58, Daode St., Luzhu Dist, Kaohiung City 821, Taiwan(R.O.C)	
	Tel:	886-7-6976793	
Emergency contact phone numbers Tel:	886-7-6976793	Fax	886-7-6975908

2. Hazards Identification

<p>GHS Classification : Corrosive to metals (1), Acute toxicity(Oral)(5), Acute toxicity(Inhalation) (2), Skin corrosion/irritation(1), Serious eye damage/eye Irritation (1)</p> <p>Hazard Symbol:</p> <div style="text-align: center;">  </div> <p>SignalWords: Danger</p> <p>HazardStatements:</p> <p>May be corrosive to metals.</p> <p>Fatal if inhaled.</p> <p>May be harmful if swallowed.</p> <p>Causes severe skin burns and eye damage.</p> <p>Causes serious eye damage.</p> <p>Preventive measure :</p> <p>Keep only in original container.</p> <p>Store container tightly closed in well-ventilated place.</p> <p>If in eyes: Rinse cautiously with water for several minutes. If eye irritation persists, get medical advice/attention.</p> <p>Wear eye/face protection.</p>
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3. Composition Information on Ingredients

Pure material:

Name: SULFURIC ACID

CAS Number: 7664-93-9

Concentration Wt.%: 45~60 %

4. First Aid Measures

Specific procedures for each route of exposure:

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult give oxygen.

Get medical attention. Maybe have delayed effect.

Skin contact: Immediately flush skin with large amounts of water at least 15 minutes. Remove contaminated clothing while washing.

Eye contact: Immediately flush eyes with large amounts of water at least 15 minutes. Get immediate medical attention.

Ingestion: Do not induce vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person. Call a physician immediately.

Major symptoms and reactions: Corrosive. Lung edema, burn, blindness.

Protection for people giving first aid: No Data Available.

Advice to doctors: No Data Available.

The most important symptoms and hazardous effects:

It will cause severe burns to eyes and skin or result in irreversible eye damage. It may severely irritate the respiratory tract and mucous membranes. Harmful or fatal if inhaled or swallowed.

The protection of first-aiders : Wear [C] class suit in the warm zone for emergency treatment ◦

Notes to physicians : 「Oxygen」 may be supplied if inhaled. Do Not induce vomit

5. Fire Fighting Measures

Suitable extinguishing media: sulfuric acid is non-flammable

Possible hazard during extinction: Concentrated sulfuric acid can ignite combustible materials on contact. Flammable and potentially explosive hydrogen gas can be generated inside metal drums and storage tanks.

Special extinction procedure: Do not use solid water streams near ruptured tanks or spills of sulfuric acid. Acid reacts violently with water and can spatter acid onto personnel. Weak sulfuric acid is non-flammable, but may decompose into fumes of oxides of sulfur at high temperature. Stay away from sealed containers.

Special protection for firefighters: Wear approved positive-pressure self-contained breathing apparatus and chemical protective equipment

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6. Accidental Release Measures

Personal precaution: Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. Wear adequate personal protective equipment.

Environmental precaution: Ventilate area. Extinguish or remove all ignition sources. Notify government occupational health and safety and environmental authorities.

Methods for cleaning up: Do not touch spilled material. Prevent material from entering sewer or confined spaces. Stop or reduce leak if safe to do so. Contain spill with earth, sand, or similar stable, non-combustible material.

Small spills: Neutralize residue with sodium bicarbonate or other suitable neutralizing agent. Flush area with plenty of water.

Large spills: Contact fire and emergency services and supplier for advice

7. Handling and Storage

Handling: Avoid contact with skin, eyes and clothing. Avoid breathing mist. Wear recommended personal protective equipment. Do not add water to acid. When diluting, always add acid to water cautiously and with agitation. Use with adequate ventilation.

Storage: Store in a cool, well-ventilated area away from combustibles and reactive chemicals. Keep out of sun and away from heat. May corrode metallic surfaces. Store in a metallic or coated fiberboard drum using a strong polyethylene inner package. Observe all warnings and precautions listed for the product.

8. Exposure Controls, Personal Protection

Engineering control: Use a corrosive-resistant ventilation system separate from other exhaust ventilation systems. Supply sufficient replacement air to make up for air removed by exhaust system. Treatment of exhaust emissions to prevent.

Control indicators:

TWA/STEL/Ceiling for an 8-hour day:

TWA: 1 mg/m³ STEL: 2 mg/m³ Ceiling: No Data Available Bio-indicator: No Data Available

Personal protection equipment:

Respiratory protection: Generally, none required. If misting conditions prevail, wear a NIOSH-approved acid-mist respirator.

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Hand protection: Wear acid-resistant gloves.

Eye protection: Wear chemical safety goggles. Add a full faceshield for pouring liquids. Do not wear contact lenses.

Skin and body protection: As a minimum, wear acid-resistant, preferably rubber, gloves and apron.

Acid-resistant boots, trousers and jacket may be used for increased protection.

Hygiene considerations: Completely decontaminate clothing, shoes before re-use. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

9. Physical , Chemical Properties

Appearance: Colorless to brown liquid

Odor: Odorless, Heat pungent flavor

Odor threshold: 1-3ppm

Melting point/freezing point: 11°C

pH value: 0.3

Boiling point/range: No Data Available

Flammability (solid, gas): No Data Available

Flash Point: No Data Available

Decomposition temperature: 340 °C

Auto-ignition temperature: No Data Available

Explosion Limits: No Data Available

Vapor Pressure: 4.46~7.95 mmHg@20°C

Vapor Density(air=1): No Data Available

Relative density(H₂O=1): 1.39 ~1.44@25°C

Water Solubility: Miscible

n-Octanol /water (log/ Kow): No Data Available

Evaporation rate: No Data Available

10. Stability and Reactivity

Stability:Normally Stable

Possible hazard under special conditions:

Conditions to be avoided: High temperatures, water.

Material to be avoided: Nitro compounds, carbides, dienes, alcohols (when heated): causes explosions.

Oxidizing agents, such as chlorates and permanganates: causes fires and possible explosions. Allyl

compounds and aldehydes: undergoes polymerization, possibly violent. Alkalies, amines, water, hydrated salts, carboxylic acid anhydrides, nitriles, olefinic organics, glycols, aqueous acids: causes strong exothermic reactions.

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Hazardous Decomposition Material: Temperatures greater than 300oC: yields sulfur trioxide gas, which is toxic.

11. Toxicological Information

Acute toxicity:

Excessive exposures may affect human health, as follows :

Inhalation: Inhalation produces damaging effects on the mucous membranes and upper respiratory tract.

Symptoms may include irritation of the nose and throat, and labored breathing. May cause lung edema, a medical emergency.

Skin contact: Corrosive. Symptoms of redness, pain, and severe burn can occur. Circulatory collapse with clammy skin, weak and rapid pulse, shallow respirations, and scanty urine may follow skin contact or ingestion. Circulatory shock is often the immediate cause of death.

Eyes contact: Corrosive. Contact can cause blurred vision, redness, pain and severe tissue burns. Can cause blindness.

Ingestion: Corrosive. Swallowing can cause severe burns of the mouth, throat, and stomach, leading to death.

Can cause sore throat, vomiting, diarrhea. Circulatory collapse with clammy skin, weak and rapid pulse, shallow respirations, and scanty urine may follow ingestion or skin contact. Circulatory shock is often the immediate cause of death.

Animal data:

LC50(test-animal, route of absorption): 510mg/m³/2H(rat, inhalation)

LD50(test-animal, route of absorption): 2140mg/kg (rat, oral)

Local effects: No Data Available.

Sensitization: Irritation to the upper respiratory system.

Effects of long-term exposure: IARC and NTP have classified "strong inorganic acid mists containing sulfuric acid" as known human carcinogens. This classification applies only to mists containing sulfuric acid and not to sulfuric acid or sulfuric acid solutions.

Special reactions: No Data Available.

12. Ecological Information

Ecotoxicity effects:

LC50 (Fish) : No Data Available.

EC50 : No Data Available.

EC50 : No Data Available.

(BCF) : No Data Available.

Persistence and degradability:

Half-life(atmosphere) : No Data Available.

Half-life(Water) : No Data Available.

Half-life(Groundwater) : No Data Available.

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Half-life(Soil) : No Data Available.

Bioaccumulative potential: This material is not expected to bioaccumulate.

Mobility in soil: When released into the soil, this material may leach into groundwater.

Other adverse effects : When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition. This material may be toxic to aquatic life

13. Disposal Considerations

Waste disposal:

1. Review federal, provincial and local government requirements period to disposal.
2. Store material for disposal as indicated in storage condition.
3. Neutralize residue with sodium bicarbonate or other suitable neutralizing agent, flush area with plenty of water.

14. Transport Information

UN number: 1830

UN Proper Shipping Name: SULFURIC ACID

Transport hazard class : 8

Packing Group: II

marine pollutant(Yes/No) : No

Special transportation method and attention: No Data Available.

15. Regulatory Information

Appropriate regulations: (Taiwan)

Labor Safety and Health Facilities Regulations, Road Traffic Safety Regulations, Industrial Waste Storage and Disposal Regulations, and Facility Standards.

16. Other Information

Literature reference	Council of labor Affairs, Executive Yuan, Taiwan (GHS in Taiwan)	
Tabulation unit	ADD: Jian Shun Chemical Co.,Ltd.	
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Lister	Title: Manager	Name (Signature): James Jhong
Tabulation date	July, 2017	
Remarks	The above information symbol "-" represents the current investigation no relevant information.	

This data sheet was produced using most accurate researched information, users are responsible for their own safety