

 <p>شركة قطر للأحماض الكيماوية Q-ACIDS</p>	<p style="text-align: center;">Qatar Acids Company Mesaieed Industrial City, P.O. Box: 50229, State of Qatar ☎ +974 4760339 📠 +974 44760341 info@qataracids.com.qa</p>
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SULPHURIC ACID 36-38%

MATERIAL SAFETY DATA SHEET

Product Name : Sulphuric Acid 36-38 %
Synonyms : Sulphuric Acid, Hydrogen Sulphate, Oil of Vitriol, Battery Acid.
Chemical Family : Inorganic acid.
Application : Water treatment. Metal pickling. Petroleum processing.
 Manufacture of fertilizers, explosives and other acids.

Prepared By : QATAR ACIDS COMPANY
Preparation date of MSDS : June 2nd, 2018

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients Percentage
(W/W)

LD50s and LC50s Route & Species:

Sulphuric Acid

7664-93-9

30-40%

Oral LD50 (Rat) 2140

mg/kg Inhalation LC50

(Rat) 347 ppm **Note:** No additional remark.

3. HAZARDS IDENTIFICATION

Potential Acute Health Effects:

Eye Contact: Corrosive to eye tissue and may cause severe damage and blindness. Inflammation of the eye is characterized by redness, watering, and itching.

Skin Contact: Corrosive! Effects on the skin may be delayed and damage may occur without the onset of pain. Causes burns, and brownish or yellow stains. Concentrated solutions may cause second or third degree burns with severe necrosis and may cause permanent scarring. Prolonged and repeated exposure to dilute solutions often causes irritation, redness, pain and drying and cracking of the skin.

Inhalation: Inhalation of the mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. May be fatal if inhaled.

Ingestion: Harmful if swallowed. Causes burns to the mouth, throat and stomach.

4. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with copious quantities of water for at least 20 minutes holding lids apart to ensure flushing of the entire surface. Seek immediate medical attention. Do not transport victim until the recommended flushing period is completed, unless flushing can be continued during transport.

Skin Contact: Flush affected skin with gently flowing water for 20-60 minutes and remove contaminated clothing while rinsing. Obtain medical attention immediately. Do not transport victim until the recommended flushing period is completed, unless flushing can be continued during transport. Remove contaminated clothing and discard. Remove contaminated shoes and discard.

Inhalation: If symptoms are experienced, remove source of contamination or move victim to fresh air. If symptoms persist, get medical attention. If the affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. In situations where administering oxygen is appropriate, first aiders must be trained in the safe use and handling of oxygen. It is preferable to administer oxygen under a doctor's supervision or advice. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation (CPR) immediately. Immediate medical assistance is required.

Ingestion: If conscious, wash out mouth with water. Seek immediate medical attention. Do NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Administer artificial respiration if breathing has stopped. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation (CPR) immediately.

Notes to Physician: Aspiration may cause severe lung damage. Evacuate stomach in a way which avoids aspiration. If ingestion has occurred less than 2 hours earlier, carry out careful gastric lavage; use endotracheal cuff if available, to prevent aspiration. Observe patient for respiratory difficulty from aspiration pneumonitis. Give artificial resuscitation and appropriate chemotherapy if respiration is depressed. Following exposure the patient should be kept under medical review for at least 48 hours as delayed pneumonitis may occur. DO NOT attempt to neutralize the acid with weak bases since the reaction will produce heat that may extend the corrosive injury.

5. FIRE FIGHTING MEASURES

Flash Point: None.

Flash Point Method: Not applicable.

Autoignition Temperature: Not Available. **Flammable Limits in Air (%):** Not Available.

Extinguishing Media: Use DRY chemicals, CO₂, alcohol foam or water spray.

Special Exposure Hazards: Strong dehydrating agent, which may cause ignition of finely divided combustible materials on contact. Reacts violently with water with the evolution of heat. It can react explosively with organic materials. Reacts with metals to generate flammable hydrogen gas. Reacts violently with water with the evolution of heat.

It can react explosively with organic materials. Reacts with many metals to liberate hydrogen gas that can form explosive mixtures with air.

Hydrogen, a highly flammable gas, can accumulate to explosive concentrations inside drums, or any types of steel containers or tanks upon storage.

Hazardous Decomposition/Combustion Materials (under fire conditions): Oxides of sulfur.

Special Protective Equipment: Fire fighters must wear full face, positive pressure, self-contained breathing apparatus and appropriate protective clothing.

NFPA RATINGS FOR THIS PRODUCT ARE: HEALTH 3, FLAMMABILITY 0, REACTIVITY 2

HMS RATINGS FOR THIS PRODUCT ARE: HEALTH 3, FLAMMABILITY 0, REACTIVITY 2

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures: Restrict access to unprotected personnel. Wear appropriate protective equipment.

Environmental Precautionary Measures: Prevent entry into sewers or streams, dike if needed. Consult local authorities.

Procedure for Clean Up: Isolate hazard area and restrict access. Stop leak only if safe to do so. Eliminate all ignition sources. Handling equipment must be grounded. Ventilate area. Contain spill with sand or other inert materials. Neutralize with lime slurry, limestone, or soda ash. Absorb with an inert dry material and place in an appropriate waste disposal container.

7. HANDLING AND STORAGE

Handling: For industrial use only. Handle and open containers with care. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid inhalation of chemical. Empty containers may contain hazardous product residues. Keep the containers closed when not in use. Protect against physical damage. Use appropriate personnel protective equipment. Use extreme care when diluting with water. ALWAYS ADD ACID TO WATER.

CAUTION: Hydrogen, a highly flammable gas, can accumulate to explosive concentrations inside drums, or any type of steel containers or tanks upon storage. Carbon steel storage tanks must be vented. Use corrosion-resistant transfer equipment when transferring acid.

Storage: Store above freezing point. Elevated temperatures will increase the corrosion rate of most metals as well as cause build-up of pressure due to sulfur dioxide generation. Store packaged acid in a dry, well-ventilated location. Avoid storage with incompatible materials. Storage tanks should be protected from water getting in, be well ventilated, and maintained structurally in a safe and reliable condition. Sulfuric acid will attack some forms of plastics and coatings.

Always add acid to water - not water to acid. If kept in upper floors of building, floors should be acid proof with drains to a recovery tank.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Use process enclosure, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. Electrical installations should be protected against the corrosive action of acid vapors.

Respiratory Protection: A NIOSH/MSHA approved air-purifying respirator equipped with acid gas/fume, dust, mist cartridges for concentrations up to 10 mg/m³. An air-supplied respirator if

concentrations are higher or unknown.

Gloves: Neoprene gloves. PVC gloves. Butyl rubber gloves.

Skin Protection: Impervious boots. Butyl rubber acid suit.

Eyes: Chemical safety goggles and/or full face shield to protect eyes and face, if product is handled such that it could be splashed into eyes.

Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work-station location.

Ingredients Exposure Limit - ACGIH Exposure Limit - OSHA Immediately Dangerous to Life or Health - IDLH

Sulphuric Acid 0.2 mg/m³ TLV-TWA 1 mg/m³ TWA 15 mg/m³

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Colour: Clear

Odour: Odourless

pH 0.3

Specific Gravity: 1.26-1.28

Boiling Point: 113-116 °C

Freezing/Melting Point: N/A

Vapour Pressure: 10 mm Hg

Vapour Density: LESS THAN 1

% Volatile by Volume: Not

Available. **Evaporation Rate:** Not

Available. **Solubility:** 100%

SOLUBLE IN water.

VOCs: Not Available.

Viscosity: Not Available.

Molecular Weight: 98.08

g/mole

10. STABILITY AND REACTIVITY

Chemical Stability: Stable.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: Avoid excessive heat, open flames and all ignition sources.

Materials to Avoid: Contact with organic materials (such as alcohol, acrylonitrile, chlorates, carbides, epichlorohydrin, fulminates, isoprene, nitrates and picrates) may cause fire and explosions. Contact with metals may produce flammable hydrogen gas.

Reducing agents. Alkalis. Moisture.

Hazardous Decomposition Products: Toxic fumes. Sulfuric acid. Oxides of sulfur.

Additional Information:

When diluting, add acid to water. DO NOT add water to the acid. Sulfuric acid can be corrosive to most metals, depending on such factors as acid concentration, temperature and impurities. Concentrated sulfuric acid (containing more than 90% H₂SO₄) can be safely handled using carbon steel, cast iron, and certain stainless steel alloys. The resistance of alloys to sulfuric acid corrosion generally increases with increasing chromium, molybdenum, copper and silicon content.

11. TOXICOLOGICAL INFORMATION

Principle Routes of Exposure

Ingestion: Harmful if swallowed. Causes burns to the mouth, throat and stomach.

Skin Contact: Corrosive! Effects on the skin may be delayed and damage may occur without the onset of pain. Causes burns, and brownish or yellow stains. Concentrated solutions may cause second or third degree burns with severe necrosis and may cause permanent scarring. Prolonged and repeated exposure to dilute solutions often causes irritation, redness, pain and drying and cracking of the skin.

Inhalation: Inhalation of the mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. May be fatal if inhaled.

Eye Contact: Corrosive to eye tissue and may cause severe damage and blindness. Inflammation of the eye is characterized by redness, watering, and itching.

Additional Information: Repeated exposure may produce erosion and discoloration of teeth.

Acute Test of Product:

Acute Oral LD50: Not Available.

Acute Dermal LD50: Not

Available. **Acute Inhalation LC50:**

Not Available. **Carcinogenicity:**

Ingredients IARC - Carcinogens ACGIH - Carcinogens

Sulphuric Acid Group 1 A2 - Suspected Human Carcinogen

(contained in strong inorganic acid mists)

Carcinogenicity Comment: WHO and IARC have concluded that occupation exposure to strong inorganic acid mists containing sulfuric acid is carcinogenic to man, (Group 1) causing cancer of the larynx and, to a lesser extent, the lung. Exposure to any mist or aerosol during the use of this product should be avoided and, in any case, keep exposure below

the occupational exposure limit for sulfuric acid. IARC's classification is for inorganic acid mists containing sulfuric acid only and does not apply to sulfuric acid or sulfuric acid solutions. **Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity:** Not Available.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

Ingredients Ecotoxicity - Fish

Species Data

Acute Crustaceans Toxicity: Ecotoxicity - Freshwater

Algae Data

Sulphuric Acid Not Available. Not Available. Not Available.

Other Information:

Harmful to aquatic life at low concentrations.

13. DISPOSAL CONSIDERATIONS

Disposal of Waste Method: Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.

Contaminated Packaging: Empty containers should be recycled or disposed of through an approved waste management facility.

14. TRANSPORT INFORMATION

DOT (U.S.):

DOT Shipping Name: Sulfuric Acid

DOT Hazardous Class 8

DOT UN Number: UN 2796

DOT Packing Group: II

DOT Reportable Quantity (lbs): 1000

Note: No additional remark. **Marine**

Pollutant: No.

ICAO/IATA:

IATA Proper Shipping Name: Sulfuric Acid

IATA Hazard Class: 8

UN Number: UN 2796

Packing Group: II

IATA Label: Corrosive.

IATA Remarks: No additional remark.

IMDG:

IMDG Proper Shipping Name: Sulfuric Acid

Hazard Class: 8

UN Number: UN 2796

Packing Group: II

Marine Pollutant:

No. **IMDG Label:**

Corrosive.

Remarks: No additional remark.

TDG (Canada):

TDG Proper Shipping Name: SULPHURIC ACID

Hazard Class: 8

UN Number: UN 2796

Pack Group: I

Note: No additional remark.

Marine Pollutant: No.

15. REGULATORY INFORMATION

U.S. TSCA Inventory Status: All components of this product are either on the Toxic Substances

Control Act (TSCA) Inventory List or exempt.

Canadian DSL Inventory Status: All components of this product are either on the Domestic

Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

Note: Not available.

U.S. Regulatory Rules

Ingredients CERCLA/SARA - Section

302:

SARA (311, 312) Hazard

Class:

CERCLA/SARA - Section

313:

Sulphuric Acid LISTED

California Proposition 65: Not Listed.

MA Right to Know List: Listed.

New Jersey Right-to-Know List:

Listed. **Pennsylvania Right to Know**

List: Listed. **WHMIS Hazardous**

Class:

D1A VERY TOXIC

MATERIALS D2A VERY

TOXIC MATERIALS

E CORROSIVE MATERIAL

END OF MSDS

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