MEDICAL CHEMICAL CORPORATION
SINCE 1954

SDS for 4 N Sulfuric Acid
Catalog # 5251A

Creation date: 08-08-2019 **Revision date: 02-12-2024** **Revision number: 1.05**

Section I - Product Identification

Product: An aqueous solution of sulfuric acid.

Intended Uses: Normally used as a general laboratory reagent.

Uses advised against: For laboratory use only.

Country of origin: United States.

Manufacturer Identification

Medical Chemical Corp.
19430 Van Ness Ave.
Torrance, CA 90501

Customer Service: Phone (310)787-6800
Email. Customerservice@med-chem.com
FAX (310)787-4464

Emergency Telephone Number

CHEMTREC Emergency Response Telephone Number: (800)424-9300. Note: The CHEMTREC phone number is only for emergencies involving spills, leaks, fire, exposure or accident. Please direct all other inquiries to our customer service phone number.

Section II - Hazard Identification

This item is considered hazardous by 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Eye damage/eye Irritation: Category 1a (H314). Causes severe skin burns and eye damage.
Corrosive to Metals: Category 1 (H290), May be corrosive to metals.
Acute toxicity (Oral): Category 4 (H302). Harmful if swallowed.
Acute toxicity (Dermal): Category 2 (H315). Causes skin irritation.

Hazard statements

Sulfuric acid is a strong acid and is corrosive to the eye and skin. Inhalation, ingestion or skin contact with material may cause severe injury or death. Avoid any skin contact. Effects of contact or inhalation may be delayed. Fire may produce irritating, corrosive and/or toxic gases.

Signal word: Danger

P102: Keep out of reach of children.
P220: Keep away from clothing and other combustible materials.
P260: Do not breathe dust/fume/gas/mist/vapors/spray.
P264: Wash thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P363: Wash contaminated clothing before reuse.
P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P405: Store locked up.

Safety Ratings

Health: Extremely hazardous *Flammability:* None *Reactivity*: Unstable if heated *Contact:* Slight

Recommended safety equipment: Safety goggles, lab coat and proper gloves

NFPA Ratings

Health = 3: Can cause serious or permanent injury.
Flammability = 0: Will not burn.
Reactivity = 1: Normally stable but high temperatures will make unstable.

Potential Health Effects

Sulfuric acid is a strong acid that will cause severe tissue damage and severe ulcers on contact with skin or eyes.

Inhalation: Extremely corrosive to mucous membranes and other structures in the respiratory tract. Will cause pulmonary edema. Inhaling droplets of the solution will cause ulceration of the structures in the respiratory tract and can cause pulmonary edema.

Ingestion: Will cause severe burns to mouth, esophagus and stomach. Also causes nausea, vomiting, diarrhea, etc.

Skin contact: Will cause severe burns and ulceration.

Eye contact: Causes serious eye damage.

Chronic Exposure: Repeated or prolonged contact with skin will cause ulceration.

Aggravation of preexisting conditions: Unknown.

Section III - Composition/Information on Components

Ingredient	CAS#	EC/List No.	% w/w
Sulfuric acid	7664-93-9	231-639-5	18% w/w

Section IV - First Aid Measures

Eyewash fountains should be provided in areas where there is any possibility that workers could be exposed to the substance; this is irrespective of the recommendation involving the wearing of eye protection. Facilities for quickly drenching the body should be provided within the immediate work area for emergency use where there is a possibility of exposure.

Inhalation: Remove from source of exposure and get immediate medical attention.

Ingestion: Rinse mouth with water but do not induce vomiting. Get immediate medical attention.

Skin Contact: Remove contaminated clothing and launder before reuse. Wash affected area with soap and water. Get medical advice if needed.

Eye Contact: P305+334+338 : Immediately rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. with running water. Get immediate medical attention.

Section V - Fire Fighting Measures

Fire: Not normally a fire hazard.

*Explosio*n: Not normally an explosion hazard.

Fire Extinguishing Media: Dry chemical, CO2, alcohol-resistant foam or water spray.

Special information: Not applicable.

Section VI - Accidental Release Measures

Absorb with a suitable absorbent such as paper towels and store in a suitable container for disposal.

Section VII - Handling and Storage

P102+P233+P403+P405; Store in a well-ventilated place. Keep container tightly closed. Keep out of reach of children. Store locked up.

Section VIII - Exposure Control/Personal Protection

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid	3 mg/m^3 TWA (Air)	1 mg/m^3 TWA (air)	15 mg/m^3

Legend

ACGIH: American Conference of Governmental Industrial Hygienists.
OSHA*:* Occupational Safety and Health Administration.
NIOSH: National Institute for Occupational Safety and Health.
IDLH: Immediately dangerous to life or health.

Ventilation System: Usually not required. When required, Refer to the ACGIH document, “Industrial Ventilation, a Manual of Recommended Practices” for details about ventilation.

Personal Respirator: Usually not required. In case of emergency, or when exposure levels are unknown, use a positive pressure, full face piece, air supplied respirator.

Skin protection: Protective gloves are required as part of good laboratory practice.

Eye Protection: Laboratory safety goggles or similar products are recommended as part of good laboratory practices

Section IX - Physical and Chemical Properties

Appearance and Odor: A clear, colorless and odorless solution.

Flash point: Not flammable
Auto ignition temperature: Not applicable
Boiling point range: No data
Decomposition temperature: Not applicable
Melting point: About 0 °C
pH: < 1
Vapor pressure (mm Hg): 18 @ 20 °C
Viscosity: No data

Flammable Limits: Not applicable.
Boiling Point: ~ 102 °C
Density: 1.12 g/ml @ 22.5 °C
Evaporation Rate (water = 1): 1
Partition coefficient: Not applicable
Solubility: Infinitely miscible with water
Vapor Density (air = 1): 0.6
VOC: Not applicable

Section X - Stability and Reactivity

Stability: Stable under normal conditions.

Hazardous Decomposition Products: Thermal decomposition will produce hazardous sulfurous oxides..

Hazardous polymerization: Will not occur.

Incompatibilities: Reacts with organic material.

Conditions to avoid: Excessive cold and heat.

Section XI - Toxicological Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sulfuric acid	2.14 g/kg (Rat)	2000 mg/kg (Rabbit).	0.51 mg/m3 2 hr (Rat)

Cancer lists

Ingredient	*Known Carcinogenicity?*	*NTP?*	*Anticipated?*	*IARC Category*
Sulfuric acid	No	No	No	A2

Section XII - Ecological Information

This product is not expected to bioaccumulate. The product biodegrades quickly and does not contain endocrine disrupters, persistent organic pollutants or ozone depleters.

Soil Mobility: Unknown
Environmental Fate: Biodegradable
Hazardous to the environment, long time hazard: Category 4 (H413). May cause long-term harmful effects to aquatic life.

For sulfuric acid

Toxicity to freshwater fish (rainbow trout):LC50 = 42 mg/l, 96 h
Toxicity to invertebrates (water flea): EC50 = 29 mg/l, 48 h
Toxicity to freshwater algae (green algae): > 100 mg/l, 72 h

Section XIII - Disposal Considerations

Local governments usually restrict the amounts of strong acids that may be flushed down the drain. Typically the pH of the sewage outflow from a building is restricted to Between 4 and 10. Also, strong acids will corrode metal plumbing. Strong acids may usually be neutralized with base by qualified individuals and then flushed down the drain. Dispose of contents and container in accordance with all federal, state and local government regulations.

Section XIV - Transportation Information

Bottles smaller than 32 Fl. Oz. are eligible to be shipped under limited quantity exemptions [49 CFR section173.154(b) and 173.154(C)].

DOT
Proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s.(Sulfuric acid solution) *Hazard Class:* 8
Packing Group: II *DOT Hazard Label:* Corrosive *DOT Identification Number:* UN3264

IATA
Proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s.(Sulfuric acid solution) *Hazard Class:* 8
Packing Group: II *DOT Hazard Label:* Corrosive *DOT Identification Number:* UN3264

Section XV - Regulatory Information

Chemical Inventory Status

Ingredient	*TSCA*	*EC*
Sulfuric acid	Yes	Yes

Federal, State and International Regulations

Ingredient	*SARA 302* *RQ*	*TPQ*	*SARA 313* *List*	*Category*	*RCRA* *261.33*	*TSCA* *8(D)*	*Ca. Prop 65*
Sulfuric acid	No	No	Yes	No	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No

SARA 311/312	
Acute:	Yes
Chronic:	No
Fire:	No
Pressure:	No

Section XVI - Other Information

This information is believed to be correct at the time of publication but is not guaranteed as such, nor does it purport to be all inclusive. Medical Chemical Corp. assumes no liability for the accuracy or completeness of the information. The user assumes all responsibility for compliance with federal, state and local laws.

Document Number: S271
Revision number: 1.05
Revision Date: Feb. 12, 2024