

Safety Data Sheet (SDS)

7/29/2024: File reviewed, more current MSDS/SDS not available. CAS

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sulfuric Acid 6 M - 18 M (Concentrated)

Signal Word
DANGER

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

Chemtrec Emergency Phone Number: (800) 424-10412

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314). Do not breathe mist, vapors or spray (P260).



Hazard class: Acute toxicity, inhalation (Category 5). May be harmful if inhaled (H333).

Hazard class: Hazardous to the aquatic environment, acute toxicity (Category 3). Harmful to aquatic life (H402).

Considerable heat generated when diluted with water.

Industrial exposure to sulfuric acid vapors and mists is listed as a known human carcinogen by IARC (IARC-1).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sulfuric acid	7664-93-9	H ₂ SO ₄	98.08	32-96%
Water	7732-18-5	H ₂ O	18.00	4-68%

SECTION 4 — FIRST AID MEASURES

Immediately call a POISON CENTER or physician (P310).

If inhaled: Call a POISON CENTER or physician if you feel unwell (P304+P312). **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338).

If on skin or hair: Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). Wash contaminated clothing before reuse (P363). **If swallowed:** Rinse mouth. Do NOT induce vomiting (P301+P330+P331).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.	NFPA Code
In case of fire: Use a tri-class dry chemical fire extinguisher.	H-3
Oxides of sulfur may be produced in fire.	F-0
When heated to decomposition it emits toxic fumes of sulfur oxides.	R-2
	No water

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Spilled sulfuric acid is very slippery. Contain spill with sand or other inert absorbent material, neutralize with sodium bicarbonate or calcium hydroxide and deposit in sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #9. Store with acids, except nitric acid.

Store in a dedicated acid cabinet and away from any source of water; if an acid cabinet is not available, store in Flinn Saf-Cube™.

Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

Exposure guidelines: PEL 1 mg/m³ (OSHA); TLV 0.2 mg/m³ (thoracic fraction) (ACGIH); IDLH 15 mg/m³

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless, dense, oily liquid. Sulfurous odor.	Boiling point: 290 °C
Soluble: Miscible with water, evolving a lot of heat.	Melting point: 10.4 °C
Decomposition temp: 340 °C	pH: <1>
	Specific gravity: 1.84
	Vapor density: 3.38

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong bases, organic materials, finely powdered metals, peroxides, carbonates, chlorates, nitrates, and reducing agents. Reacts violently with water. Always add acid to water, never the reverse.

Shelf life: Good, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Corrosive to all body tissues, severe respiratory tract irritant.	ORL-RAT LD ₅₀ : 2140 mg/kg
Chronic effects: Lung, nose and throat damage, cancer, tooth erosion.	IHL-RAT LC ₅₀ : 510 mg/m ³ /2 hour
Target organs: Eyes, skin, respiratory system, and teeth.	SKN-RBT LD ₅₀ : N.A.

SECTION 12 — ECOLOGICAL INFORMATION

Fish: Bluegill/Sunfish: 49 mg/L; 48Hr; TLm (tap water @ 20 oC)

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #24b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Sulfuric Acid. Hazard class: 8, Corrosive. UN number: UN1830

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-639-5). RCRA code D002, D003.

SECTION 16 — OTHER INFORMATION

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N.A. = Not available, not all health aspects of this substance have been fully investigated.

N/A = Not applicable

Consult your copy of the Flinn Science Catalog/Reference Manual for additional information about laboratory chemicals.

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