

FLINN SCIENTIFIC, INC.

Material Safety Data Sheet (MSDS)

MSDS #: 801.00

Revision Date: November 2, 2010

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sulfuric Acid (9M - 18M)

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

CHEMTREC Emergency Phone Number: (800) 424-9300

SECTION 2 — COMPOSITION, INFORMATION ON INGREDIENTS

Sulfuric Acid (7664-93-9) 48-96%, and water (7732-18-5) 4-52%

Concentration: 9M - 18M

CAS#: 7664-93-9

SECTION 3 — HAZARDS IDENTIFICATION

Colorless, dense, oily liquid. Sulfurous odor.

Highly toxic by ingestion and inhalation. Severely corrosive to eye, skin, and all other body tissues.

Avoid all body tissue contact.

Considerable heat generated when diluted with water.

FLINN AT-A-GLANCE

Health-3

Flammability-0

Reactivity-3

Exposure-3

Storage-3

0 is low hazard, 3 is high hazard

SECTION 4 — FIRST AID MEASURES

Call a physician, seek medical attention for further treatment, observation and support after first aid.

Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.

Eyes: Immediately flush with fresh water for at least 15 minutes.

External: Wash continuously with fresh water for at least 15 minutes.

Internal: Do not induce vomiting. Give 1 to 2 cups of water or milk, followed by a gastric antacid, such as Milk of Magnesia. Call a physician or poison control at once.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable liquid.

When heated to decomposition emits toxic fumes of SOx.

Fire Fighting Instructions: Use dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive pressure mode.

NFPA Code

H-3

F-0

R-2

No water

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from area. Remove all ignition sources and ventilate area. 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.

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 and dispense in a hood.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits. Always wear a NIOSH-approved respirator with proper cartridges or a positive pressure, air-supplied respirator when handling this material in emergency situations (spill or fire). Exposure guidelines: TWA 1 mg/m³, STEL 3 mg/m³ (as sulfuric acid) (OSHA, ACGIH).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless, dense, oily liquid. Sulfurous odor.
Formula: H_2SO_4
Formula Weight: 98.08
Concentration: 9-18 Molar
Solubility: Miscible with water evolving alot of heat.

Boiling Point: 290 °C
Melting Point: 10.4 °C
pH: <1
Specific Gravity: 1.84
Vapor Density: 3.38 (Air=1)

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 safely.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Severely corrosive, severe respiratory tract irritant
Chronic effects: Kidney, lung, and skin damage
Target organs: Eyes, skin, kidneys, respiratory system

ORL-RAT LD_{50} : 2140 mg/kg as sulfuric acid
IHL-RAT LC_{50} : 510 $mg/m^3/2$ hour as sulfuric acid
SKN-RBT LD_{50} : N.A.

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

SECTION 12 — ECOLOGICAL INFORMATION

Fish: Bluegill/Sunfish: 49 mg/L; 481 hr; TLm (tap water @ 20 °C)

SECTION 13 — DISPOSAL CONSIDERATIONS

Please consult with state and local regulations.
Flinn Suggested Disposal Method #24b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping Name: Sulfuric Acid
Hazard Class: 8, Corrosive
UN Number: UN1830
N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

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

SECTION 16 — OTHER INFORMATION

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