

# FLINN SCIENTIFIC, INC.

## Material Safety Data Sheet (MSDS)

MSDS #: 801.04

Revision Date: November 19, 2010

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Sulfuric Acid Solution (<1M)

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) 0.3-5.3% and Water (7732-18-5) 94.7-99.7%

Concentration: 1M or less

CAS#: None established

### SECTION 3 — HAZARDS IDENTIFICATION

Clear, colorless acidic solution. Slight sulfurous odor.  
Slightly toxic by ingestion. Severely irritating to body tissues, especially eyes.  
Avoid all body tissue contact.

#### FLINN AT-A-GLANCE

Health-1  
Flammability-0  
Reactivity-1  
Exposure-1  
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.  
Eye: 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 SO<sub>x</sub>.

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

#### NFPA CODE

None  
established

### 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/m<sup>3</sup>, STEL 3 mg/m<sup>3</sup> (as sulfuric acid) (OSHA, ACGIH)

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

Clear, colorless liquid. Slight sulfurous odor. pH: <1  
Formula: H<sub>2</sub>SO<sub>4</sub>  
Formula Weight: 98.08  
Concentration: <1 Molar  
Miscible with water.

**SECTION 10 — STABILITY AND REACTIVITY**

Avoid contact with strong bases, organic materials, finely powdered metals, peroxides, carbonates, chlorates, nitrates, and reducing agents.  
Shelf Life: Good, if stored safely.

**SECTION 11 — TOXICOLOGICAL INFORMATION**

Acute effects: Severely corrosive, respiratory tract irritant	ORL-RAT LD <sub>50</sub> : 2140 mg/kg as sulfuric acid
Chronic effects: Kidney, lung, and skin damage	IHL-RAT LC <sub>50</sub> : 510 mg/m <sup>3</sup> /2 hour as sulfuric acid
Target organs: Eyes, skin, kidneys, respiratory system	SKN-RBT LD <sub>50</sub> : 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; 48Hr; 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 Solution  
Hazard Class: 8, Corrosive  
UN Number: UN2796  
N/A = Not applicable

**SECTION 15 — REGULATORY INFORMATION**

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

**SECTION 16 — OTHER INFORMATION**

This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

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