

# FLINN SCIENTIFIC, INC.

## Material Safety Data Sheet (MSDS)

MSDS #: 801.00

Revision Date: October 14, 2011

### 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. Strong sulfur 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 and 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 or External: Immediately flush with fresh water for at least 15 minutes.

Internal: Do NOT induce vomiting. Rinse mouth. Give large quantities of water for dilution. 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

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

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

Colorless, dense, oily liquid. Sulfurous odor.

Formula: H<sub>2</sub>SO<sub>4</sub>

Formula weight: 98.08

Concentration: 9-18 Molar

Solubility: Miscible with water evolving allot of heat.

Boiling point: 290 °C

Melting point: 10.4 °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: Severely corrosive, severe respiratory tract irritant

Chronic effects: Kidney, lung, and skin damage

Target organs: Eyes, skin, kidneys, respiratory system

ORL-RAT LD<sub>50</sub>: 2140 mg/kg as sulfuric acid

IHL-RAT LC<sub>50</sub>: 510 mg/m<sup>3</sup>/2 hour as sulfuric acid

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 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

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.**