

# FLINN SCIENTIFIC, INC.

## Material Safety Data Sheet (MSDS)

MSDS #: 5.20

Revision Date: July 13, 2011

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Acetic Acid Solution (1M - 6M)

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

Acetic Acid (64-19-7) 3-36%, Water (7732-18-5) 64-97%  
Synonyms: vinegar acid, ethanoic acid  
CAS#: 64-19-7

### SECTION 3 — HAZARDS IDENTIFICATION

Clear, colorless acidic aqueous solution. Strong vinegar odor.  
Corrosive, causes severe burns to eyes and skin. Toxic by ingestion, inhalation, and skin absorption.  
Combustible liquid and vapor.

#### FLINN AT-A-GLANCE

Health-2  
Flammability-1  
Reactivity-1  
Exposure-23  
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: Rinse mouth. Give large quantities of water for dilution. Call a physician or poison control at once.

### SECTION 5 — FIRE FIGHTING MEASURES

Combustible liquid and vapor. When heating to decomposition, emits irritating fumes.  
Flash Point for 36% acetic acid: 72 °C (Closed Cup)  
**Fire Fighting Instructions:** Use a 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 the area. Remove all ignition sources and ventilate area. Contain the spill with sand or other inert absorbent material, neutralize with sodium bicarbonate or calcium hydroxide, and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

### SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #1. Store with acids, anhydrides and peracids. Store away from nitric acid. Store in a dedicated acid cabinet and away from any source of water. If an acid cabinet is not available, store in a Flinn Saf-Cube. Use and dispense in a hood. Always add acid to water.

### 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: PEL 10 ppm, STEL 15 ppm (as acetic acid) (OSHA, NIOSH)

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

Clear, colorless liquid with a strong vinegar-like odor.

Solubility: Soluble in water.

Formula: CH<sub>3</sub>CO<sub>2</sub>H

Formula weight: 60.05

Concentration: 1-6 molar; 6-36% acetic acid

pH: &lt;2

**SECTION 10 — STABILITY AND REACTIVITY**

Avoid contact with strong oxidizers, especially chromic and nitric acids.

Shelf life: Indefinite, if stored properly.

**SECTION 11 — TOXICOLOGICAL INFORMATION**

Acute effects: Corrosive

Chronic effects: Respiratory tract inflammation, darkens skin.

Target organs: Mucous membranes, respiratory tract, eyes, skin.

ORL-RAT LD<sub>50</sub>: 3310 mg/kg as acetic acidIHL-MUS LC<sub>50</sub>: 5620 ppm/1hour as acetic acidSKN-RBT LD<sub>50</sub>: 1060 mg/kg as acetic acid

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

**SECTION 12 — ECOLOGICAL INFORMATION**

May be toxic to aquatic life.

**SECTION 13 — DISPOSAL CONSIDERATIONS**

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

Flinn Suggested Disposal Method #24a is one option.

**SECTION 14 — TRANSPORT INFORMATION**

Shipping name: Acetic Acid Solution

Hazard class: 8, Corrosive, Flammable Liquid

UN number: UN2790

N/A = Not applicable

**SECTION 15 — REGULATORY INFORMATION**

TSCA-listed; EINECS-listed (200-580-7); RCRA code D001, D002.

**SECTION 16 — OTHER INFORMATION**

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