

# FLINN SCIENTIFIC, INC.

## Material Safety Data Sheet (MSDS)

MSDS #: 244.10

Revision Date: February 24, 2012

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Citric Acid Solution, (0.5M - 1.0M)

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

Monohydrate citric acid (5949-21-1) 10%-20% and Water (7732-18-5) 80%-90%.

Concentration: 0.5 - 1 Molar

CAS#: None established

### SECTION 3 — HAZARDS IDENTIFICATION

Clear, colorless aqueous solution. Odorless.

A moderate eye and skin irritant.

#### FLINN AT-A-GLANCE

Health-0

Flammability-0

Reactivity-0

Exposure-1

Storage-0

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

Noncombustible liquid.

#### NFPA CODE

None

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

established

### SECTION 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from the area and ventilate area. Contain the spill with sand or absorbent material 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.

### SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles and chemical-resistant gloves.

---

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

---

Clear, colorless liquid Odorless.

Solubility: Water soluble.

Formula:  $C_6H_8O_7 \cdot H_2O$ 

Formula weight: 210.15

Concentration: 0.5 - 1.0 molar

pH: acidic

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Shelf life: Indefinite, if stored properly.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: Moderate eye irritant.

Chronic effects: N.A.

Target organs: N.A.

ORL-RAT LD<sub>50</sub>: N.A.IHL-RAT LC<sub>50</sub>: N.A.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**

---

Data not yet available.

---

**SECTION 13 — DISPOSAL CONSIDERATIONS**

---

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

Flinn Suggested Disposal Method #26a is one option.

---

**SECTION 14 — TRANSPORT INFORMATION**

---

Shipping name: Not regulated.

Hazard class: N/A

UN number: N/A

N/A = Not applicable

---

**SECTION 15 — REGULATORY INFORMATION**

---

TSCA-listed; EINECS-listed (201-069-1).

---

**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.**