



# CITRIC ACID 50% LIQUID SAFETY DATA SHEET

## SECTION 1: IDENTIFICATION

**Product Identifier:**

Citric Acid 50% Liquid

**Other means of Identification:**

None

**Recommended Use:**

Food additive or industrial

**Chemical Manufacturer:**

Bio-Cide International, Inc.  
2650 Venture Drive  
Norman, Oklahoma 73069  
Phone: (405) 329-5556  
Fax: (405) 329-2681

**Emergency Telephone Number:**

Chemtrec for transportation emergencies in the United States, Canada, Puerto Rico, and Virgin Islands 1-800-424-9300; All other areas 1-703-527-3887  
American Association of Poison Control Centers 1-800-222-1222  
Chemtrec contract number 2749

## SECTION 2: HAZARD(S) IDENTIFICATION

**Classification in accordance with OSHA 29 CFR 1910.1200 (d):**

Eye Damage/Irritation: Category 2A

**GHS Label elements, including precautionary statements:**

**Signal word: Warning**

**Pictograms:**

**Hazard Statements:**

Causes serious eye irritation.

**Precautionary statements:**

Wash hands thoroughly after handling. Wear eye protection/face protection.

**Response statements:**

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists; Get medical attention.

Store away from incompatible materials.

Dispose of contents and container in accordance with local, state and federal regulations.

### SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Substance	CAS #	Concentration
Citric acid	77-92-9	50 - 60%

If the specific chemical identity and/or the exact percentage of an ingredient are not specified, the information has been withheld as a trade secret.

### SECTION 4: FIRST-AID MEASURES

The following procedures are recommended as emergency first aid only. They are not intended to replace or supplant the treatment advice of a physician or other authorized health care specialist.

**Inhalation:** Move to fresh air. Oxygen or artificial respiration if needed. Call a physician if symptoms develop or persist.

**Skin Contact:** Rinse skin with water/shower. Get medical attention if irritation develops and persists.

**Eye Contact:** Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

**If Swallowed:** Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.

**Most important symptoms/effects, acute and delayed:** Causes serious eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

### SECTION 5: FIRE-FIGHTING MEASURES

**Suitable extinguishing media:** Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media:** Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical:** During fire, gases hazardous to health may be formed such as: Carbon oxides (CO<sub>x</sub>).

**Special protective equipment and precautions for firefighters:** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions:** In the event of fire and/or explosion do not breathe fumes. Use water spray to cool unopened containers.

**Specific methods:** Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards:** No unusual fire or explosion hazards noted.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### Personal precautions, PPE and emergency procedures

Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Use a NIOSH approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

### **Methods and materials for containment and cleaning up**

Avoid the generation of dusts during clean-up. Collect dust using a vacuum cleaner equipped with HEPA filter. This product is miscible in water. Should not be released into the environment. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Absorb in vermiculite, dry sand or earth and place into containers. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.

### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

## **SECTION 7: HANDLING AND STORAGE**

### **HANDLING:**

Provide adequate ventilation. Avoid contact with eyes, skin, and clothing. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices. Use care in handling/storage.

### **PRODUCT STORAGE:**

Store in tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

## **SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

No Occupational Safety and Health Administration (OSHA) permissible exposure limit (PEL) or American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit values (TLV) have been established for this product.

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits. Provide eyewash station.

### **RESPIRATORY PROTECTION:**

In case of insufficient ventilation, use a NIOSH approved air purifying respirators In accordance with OSHA regulations (29 CFR 1910.134 and 29 CFR 1910.1000).

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**(a) Appearance (physical state, color, etc.):** Clear to yellow liquid

**(b) Odor:** Odorless

**(c) Odor threshold:** Not determined

**(d) pH:** 0.6

**(e) Melting point/freezing point:** Not available

**(f) Initial boiling point and boiling range:** >212°F (>100°C)

**(g) Flash point:** Not applicable

**(h) Evaporation rate:** <1

**(i) Flammability (solid, gas):** Not available

**(j) Upper/lower flammability or explosive limits:** Not available

**(k) Vapor pressure:** Not available

**(l) Vapor density:** Not available

**(m) Relative density:** 1.24

**(n) Solubility(ies):** Soluble (water)

**(o) Partition coefficient: n-octanol/water:** Not available

**(p) Auto-ignition temperature:** Not applicable

**(q) Decomposition temperature:** Not available

**(r) Viscosity:** Not available

## SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** Reacts violently with strong alkaline substances. This product may react with reducing agents.

**Chemical stability:** Stable at normal temperatures and pressures.

**Possibility of hazardous reactions:** No dangerous reaction known under conditions of normal use.

**Conditions to avoid:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Reacts violently with strong alkaline substances. Contact with incompatible materials. This product may react with reducing agents. Do not mix with other chemicals.

**Incompatible materials:** Bases. Reducing agents. This product may react with reducing agents. Incompatible with bases.

**Hazardous decomposition products:** No hazardous decomposition products are known.

## SECTION 11: TOXICOLOGICAL INFORMATION

**Likely routes of exposure:**

**Oral:** May cause discomfort if swallowed.

**Dermal:** May cause skin irritation.

**Inhalation:** Prolonged inhalation may be harmful.

**Eye contact:** Causes serious eye irritation.

**Component toxicity: Citric acid (CAS 77-92-9)**

Acute Toxicity, Oral: LD50 >2000 mg/kg, 24 hours (rat)

Acute Toxicity, Dermal: LD50 5400 mg/kg (mouse)

**Serious eye damage/eye irritation:** Causes moderate eye irritation.

**Respiratory Sensitization:** Not classified.

**Skin Sensitization:** Not classified.

**Specific target organ toxicity – single exposure:** Not classified.

**Specific target organ toxicity – repeated exposure:** Not classified.

**Reproductive toxicity:** Not classified.

**Germ cell mutagenicity:** Not classified.

**Carcinogenicity:** Not classified as a carcinogen by NTP, IARC, or OSHA

**Aspiration hazard:** Not an aspiration hazard.

## SECTION 12: ECOLOGICAL INFORMATION

Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

**Persistence and degradability:** Citric acid (CAS 77-92-9): Biodegradation : 97%; Testing period: 28 d; OECD 301B; Readily biodegradable.

**Bioaccumulative potential:** No data available.

**Mobility in soil:** This product is soluble in water.

### **SECTION 13: DISPOSAL CONSIDERATIONS**

**Product Disposal:** Dispose of contents/container in accordance with all applicable regulations.

### **SECTION 14: TRANSPORT INFORMATION**

**US Department of Transportation:** Not regulated for transport

**IATA:** Not regulated for transport

**IMDG:** Not regulated for transport

### **SECTION 15: REGULATORY INFORMATION**

#### **U.S. REGULATIONS**

**CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):**

Not regulated.

**EPCRA SECTION 313 (40 CFR 372.65):**

Not regulated.

#### **NATIONAL INVENTORY STATUS**

**U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA):**

All components are listed or exempt.

**Canadian Chemical Inventory:**

All components of this product are listed on either the DSL or the NDSL

#### **STATE Regulations**

Contact your Kemin account representative for state-specific regulatory information.

#### **FIFRA Labeling Requirements:**

Not applicable.

### **SECTION 16: OTHER INFORMATION**

**NOTICE:** Manufacturer believes the information contained herein is accurate; however we make no guarantees with respect to such accuracy and assume no liability in connection with the use of the information contained herein by any party. Any party using this product should review all such laws, rules or regulations prior to use.

**NO WARRANTY IS MADE, EXPRESS OR IMPLIED FOR A PARTICULAR PURPOSE OR OTHERWISE**

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