

Safety Data Sheet

SDS# 008

Citric Acid 50%



Crystal Clear Lab™

Citric Acid 50% Aqueous Solution

SECTION 1: IDENTIFICATION

Product Identifier: Citric Acid 50% Aqueous Solution

Synonyms: 50% Citric Acid Solution

Manufacturer: Crystal Clear Lab

Address: 13854 C Plaza, Omaha, NE 68144

Telephone Number: 531-867-7189

24-Hour Emergency Contact: 1-833-875-0643

Recommended Use: Chemical for synthesis; for the onsite generation of chlorine dioxide in small amounts. Packaged in limited quantities for consumer household use.

Restrictions on Use: Use only as directed.

SECTION 2: HAZARD IDENTIFICATION

GHS Classification:

Eye Irritation – Category 2A

Skin Irritation – Category 2

GHS Pictograms:



Signal Word: Warning

Hazard Statements:

Causes skin and serious eye irritation.

Corrosive to metals.

Precautionary Statements: Avoid eye contact; avoid prolonged skin contact; wash hands after handling. If in eyes: rinse with water. Store tightly closed. Dispose of contents per local regulations.

(See Sections 6, 7, 8, and 13 for detailed measures.)

Disposal: Dispose of contents/container in accordance with local/regional regulations. Remove and wash contaminated clothing before reuse.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

All percentages are w/w

Main Component	CAS No.	Formula	Concentration
Citric Acid	77-92-9	$C_6H_8O_7$	50%
Water	7732-18-5	H_2O	50%

SECTION 4: FIRST AID MEASURES

Inhalation: Move to fresh air. Not expected to be an inhalation hazard.

Skin Contact: Rinse affected area with soap and water. Remove contaminated clothing.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses if easy to do. Continue rinsing. Seek medical attention if irritation persists.

Ingestion: Rinse mouth. Do not induce vomiting. Drink water or milk to dilute. Seek medical help if symptoms persist.

SECTION 5: FIRE-FIGHTING MEASURES

Flammability: Not flammable.

Extinguishing Media: Use water spray, fog, or dry chemical suitable for surrounding fire.

Hazardous Combustion Products: Carbon oxides (CO, CO₂).

Protective Equipment: Wear self-contained breathing apparatus and full protective gear in enclosed space.

Flash Point & Method: Not applicable.

Upper/Lower Flammability Limits: Not applicable.

Auto-Ignition Temperature: Not applicable.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Section 6(A): Bulk Storage and Transport

Personal Precautions, Protective Equipment, and Emergency Procedures: Wear protective clothing, gloves, and eye/face protection. Ensure adequate ventilation.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and Materials for Containment and Cleaning Up: Contain spillage, and then collect with non-combustible absorbent material (e.g., sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local regulations.

Section 6(B): Consumer Quantities

Small Spills: Wipe up with a damp cloth paper towel and rinse area with water.

Larger Spills: Neutralize with baking soda, or dilute with excess water to minimize concentration. Absorb with inert material such as sand, earth, diatomaceous earth, or vermiculite.

SECTION 7: HANDLING AND STORAGE

Handling: Avoid contact with skin or eyes. Use in a well-ventilated area. Wash hands thoroughly after handling. Avoid inhaling mist or vapors.

Storage: Store upright in tightly sealed containers, away from direct sunlight and incompatible materials. Do not freeze.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits: No occupational limits established for citric acid.

Engineering Controls: Use with adequate ventilation.

Personal Protection:

Eye/Face Protection: Safety goggles.

Skin Protection: Neoprene or nitrile gloves. Protective clothing.

Respiratory Protection: Not required under normal consumer use; use NIOSH mask if mist present.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colorless liquid.

Odor: Odorless.

pH: 1.5 – 2.5

Boiling Point: ~100°C

Freezing Point: ~0°C

Specific Gravity: 1.25 g/cm³

Solubility: Fully miscible in water.

Viscosity: Slightly thicker than water.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Reacts with strong bases and oxidizing agents.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: None expected under normal use.

Conditions to Avoid: Excessive heat, direct sunlight, incompatible materials.

Incompatible Materials: Strong bases, oxidizing agents.

Hazardous Decomposition Products: Carbon oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity: Low acute toxicity. May cause irritation in concentrated form.

Skin Irritation: May cause irritation on prolonged contact.

Eye Irritation: Causes eye irritation.

Respiratory Sensitization: Not expected.

Mutagenicity: Not classified.

Carcinogenicity: Not classified.

Reproductive Toxicity: Not classified.

STOT – Single Exposure: May cause respiratory irritation.

STOT – Repeated Exposure: Not classified.

Aspiration Hazard: Not expected.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity: Not expected to be harmful in typical use. High concentrations may alter pH of aquatic environments.

Persistence and Degradability: Readily biodegradable.

Bioaccumulation Potential: Low.

Mobility in Soil: Highly mobile in soil and water.

Other Adverse Effects: None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Section 13(A): Bulk Storage and Transport

Waste Treatment Methods: Dispose of contents/container in accordance with local/regional/national/international regulations. Avoid release to the environment.

Section 13(B): Consumer Quantities

Small amounts of leftover solution can be flushed down the drain. Dilute larger amounts with plenty of water and flush down drain. Can be neutralized with baking soda.

SECTION 14: TRANSPORT INFORMATION

UN Number: Not regulated.

Proper Shipping Name: Not regulated.

Hazard Class: Not regulated.

Packing Group: Not regulated.

Additional Info: Not classified as dangerous goods for transport.

SECTION 15: REGULATORY INFORMATION

Regulatory Status: Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA: All components listed.

SARA 302: Not subject.

SARA 313: Not subject.

California Prop 65: No listed substances.

WHMIS: Not classified.

SECTION 16: OTHER INFORMATION

Date of Last Revision: August 2026

Revision Note: Revised to update spill and disposal instructions for 50% Citric Acid. (see below)

Section 6 (Accidental Release Measures) & Section 13 (Disposal Considerations):

- Revised to differentiate between consumer-level and warehouse/bulk shipment protocols.
- These changes provide practical and regulatory-compliant handling and disposal instructions for real-world consumer use scenarios.

Supersedes: All previous versions.

Disclaimer: This Safety Data Sheet is provided for informational purposes only and is intended solely as a guide for the safe handling, use, processing, storage, transportation, and disposal of the product. It includes considerations for small, consumer-sized retail packaging. The information is believed to be accurate as of the date of issue but does not constitute a legally binding guarantee of product specifications or fitness for a particular purpose. No warranty, express or implied, is made. The user assumes full responsibility for safe and compliant use of the product.