SAFETY DATA SHEET

Citric Acid, Monohydrate, ACS

Revised: 11/17/2026

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Citric Acid, Monohydrate, ACS
Synonyms: Citric Acid
CAS Number: 5949-29-1
Grade/Purity: ACS Reagent
Product Type: Organic Acid (Solid)
Product Use: Industrial, Manufacturing or Laboratory use
Manufacturer/Supplier: Alliance Chemical, 204 South Edmond St, Taylor, Texas 76574
Information: 512-365-6838 | www.alliancechemical.com
Emergency: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

Signal Word: Warning
GHS Pictograms:



Hazard Statements:

H319	Causes serious eye irritation.

Precautionary Statements:

P264	Wash hands thoroughly after handling.
P280	Wear eye protection / face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice / attention.
P501	Dispose of contents and container in accordance with all applicable regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	% MIN	% MAX	CAS #	EINECS# / ELINCS#	FORMULA	MOLECULAR WEIGHT
Citric Acid	99.5	100.5	5949-29-1	227-807-0	$C_6H_8O_7$	210.14 (monohydrate) g/mol

4. FIRST-AID MEASURES

Eyes	Rinse cautiously with water for several minutes; remove contact lenses if present and easy to do; continue rinsing. Get medical attention if irritation persists.
Skin	Wash with soap and water. Get medical attention if irritation develops.
Inhalation	Move to fresh air if dust is inhaled. Get medical attention if irritation persists.
Ingestion	Rinse mouth. Low acute toxicity. Get medical attention if a large amount is swallowed.

5. FIRE-FIGHTING MEASURES

Suitable Media	Use water spray, alcohol-resistant foam, dry chemical, or CO2. Use measures appropriate to local circumstances.

Unsuitable Media	Do not use a solid water stream as it may scatter and spread fire.
Protective Equipment	Wear self-contained breathing apparatus and full protective clothing.
Combustion Products	May include carbon oxides and other toxic fumes. See Section 10.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental	Prevent leakage or spillage from entering drains, sewers, or waterways.
Containment & Cleanup	Sweep or vacuum up, avoiding dust. Collect in appropriate waste container. Dispose per applicable regulations.

7. HANDLING AND STORAGE

Safe Handling	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
Safe Storage	Store in a cool, dry, well-ventilated area. Keep away from: Strong oxidizers, strong bases, metal nitrates, reducing agents, alkali/alkaline-earth metals. Keep containers tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.

Occupational Exposure Limits:

AGENCY	EXPOSURE LIMIT
OSHA PEL	None established
ACGIH TLV	None established
NIOSH REL	None established
IDLH	Not established

Eyes	Wear chemical safety goggles or face shield.
Skin	Wear chemical-resistant gloves and protective clothing.
Inhalation	Use NIOSH-approved respirator if exposure limits are exceeded or irritation occurs.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White to colorless crystalline granules or powder
Odor	Odorless
Median Particle Size	Not Available
Particle Size Distribution	Not Available
Particle Shape	Not Available
Surface Area	Not Available
Dustiness	Not Available
Hygroscopicity	Not Available
pH	~1.85 (5% aqueous solution)
Melting Point	135-152 C (loses water of hydration ~100 C; anhydrous m.p. 153 C)
Boiling Point	Decomposes above ~175 C
Flash Point	155 C (combustible solid; dust may form explosible clouds)
Vapor Pressure	Negligible (< 0.01 mmHg at 25 C)
Specific Gravity	1.542 (monohydrate, 20 C)
Solubility	Very soluble in water (~1600 g/L at 20 C); soluble in ethanol

Molecular Formula	$C_6H_8O_7$
Molecular Weight	210.14 (monohydrate) g/mol

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Hazardous Reactions	None under normal processing conditions.
Conditions to Avoid	Heat, sparks, open flame, and incompatible materials.
Incompatible Materials	Strong oxidizers, strong bases, metal nitrates, reducing agents, alkali/alkaline-earth metals
Decomposition Products	May produce carbon oxides and other toxic fumes when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: See below for route-specific data.

ROUTE	VALUE
LD50 Oral	3000 mg/kg (rat, oral)
LD50 Dermal	> 2000 mg/kg (rabbit, dermal)
LC50 Inhalation	Not established (nuisance dust)

IARC	Not listed as carcinogen.
NTP	Not listed as carcinogen.
OSHA	Not listed as carcinogen.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Fish LC50: 440-1516 mg/L (fathead minnow, 96 h); Daphnia EC50: ~120 mg/L (Daphnia magna, 48 h) [PubChem]
Persistence	Readily biodegradable (>90% in 28 days)
Bioaccumulation	BCF: Low (no bioaccumulation; log Kow < 1)
Mobility in Soil	High mobility in soil (Log Kow < 1)

13. DISPOSAL CONSIDERATIONS

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

14. TRANSPORT INFORMATION

US DOT	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.
IATA/ICAO	Not regulated as dangerous goods.
Marine Pollutant	No
Note	Hazard communication note: Product may meet GHS hazard criteria for workplace handling, while not being regulated as dangerous goods for transport.

15. REGULATORY INFORMATION

TSCA: listed. SARA 313 (TRI): not listed. CERCLA: no RQ. California Proposition 65: not listed. State Right-to-Know: may be listed. US DOT: not regulated (non-hazardous for transport per 49 CFR 172.101).

SARA 311/312	See Section 2 for hazard classifications.

16. OTHER INFORMATION

Revision Date: 11/17/2026

Disclaimer: The information provided in this Safety Data Sheet is correct to the best of our knowledge at the date of publication. It relates only to the specific product identified and does not relate to its use in combination with other materials. ALLIANCE CHEMICAL MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALLIANCE CHEMICAL DOES NOT ASSUME LIABILITY FOR LOSS, INJURY, DAMAGE, OR EXPENSE ARISING FROM THE HANDLING, STORAGE, USE, OR DISPOSAL OF THIS PRODUCT.