

TECHNICAL DATA SHEET

Citric Acid Anhydrous - ACS Reagent Grade

CAS NUMBER	ALLIANCE CODE	GENERATED
77-92-9	citric-acid-anhydrous-acs-reagent-grade	2026-07-17

1. IDENTITY & COMPOSITION

PRODUCT NAME	ALLIANCE CODE
Citric Acid Anhydrous – ACS Reagent Grade	citric-acid-anhydrous-acs-reagent-grade
GRADE	CONCENTRATION
—	—
CAS NUMBER	FORMULA
77-92-9 PubChem	C6H8O7 PubChem
MOLECULAR WEIGHT	PRODUCT TYPE
192.12 PubChem	—

AVAILABLE GRADES SAME CAS, ALTERNATE GRADES AND CONCENTRATIONS

GRADE	CONCENTRATION	TYPICAL ASSAY	SKU
THIS GRADE —	—	—	current
—	50%	—	citric-acid-50-solution
—	25%	—	citric-acid-25-solution
—	—	—	citric-acid-anhydrous-food-grade

Typical assay shown is the rolling-window mean from the sibling product's most recent lots. Grade selection drives downstream end-use — verify the sibling grade matches your specification before substitution.

PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE

Citric acid appears as colorless, odorless crystals with an acid taste. Denser than water. (USCG, 1999) **Product record**

DENSITY

1.54 at 68 °F (USCG, 1999) – Denser than water; will sink **Product record**

MELTING POINT

307 °F (anhydrous) (NTP, 1992) **Product record**

SOLUBILITY (WATER)

greater than or equal to 100 mg/mL at 72 °F (NTP, 1992) **Product record**

ODOR

Odorless **Product record**

BOILING POINT

Decomposes (NTP, 1992) **Product record**

FLASH POINT

100 °C **Product record**

REGULATORY & TRANSPORT

DOT / 49 CFR

UN NUMBER

Not regulated **Adjudicated**

PACKING GROUP

Not regulated **Adjudicated**

HAZARD CLASS

Not regulated **Adjudicated**

PROPER SHIPPING NAME

Not regulated **Adjudicated**

GHS / OSHA HAZCOM 2012

SIGNAL WORD

Warning **Adjudicated**

H-CODES (HAZARD STATEMENTS)

H319, H335 **Adjudicated**

P-CODES (PRECAUTIONARY STATEMENTS)

P261, P264, P271, P280, P304+P340, P305+P351+P338, P314, P337+P313, P403+P233, P405, P501 **Adjudicated**

OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL (29 CFR 1910.1000)

— **unknown**

ACGIH TLV

— **unknown**

NIOSH REL

— **unknown**

NIOSH IDLH

— **unknown**

Transport descriptions reflect 49 CFR 172.101 lookup at time of publication. Sourced data: ECHA CLP Annex VI for harmonised classifications, NIOSH Pocket Guide for REL/IDLH, OSHA Z-Tables for PEL. Always verify against the latest regulatory text before shipment-critical decisions.

Supplier Qualification Packet

One zipped download containing the TDS, SDS, latest lot COA (when available), and a fresh Letter of Continuing Guaranty for Citric Acid Anhydrous – ACS Reagent Grade. Every file included is SHA-256 hashed and listed in a manifest your QA team can audit.

APPLICATION GUIDANCE

Citric Acid Anhydrous – ACS Reagent Grade application guidance is available on request. Contact Alliance Chemical Technical Services for grade-specific use recommendations.

STORAGE & HANDLING

RECOMMENDED STORAGE

Cool, dry, well-ventilated area in original sealed containers. Refer to product SDS for material-specific guidance.

INCOMPATIBILITIES

Consult the SDS for material-specific incompatibilities.

HANDLING PRECAUTIONS

Use standard chemical PPE — splash goggles, gloves, lab coat. Refer to SDS for hazard-specific PPE requirements.

SHELF LIFE

24 months from date of manufacture in sealed, original packaging

For full hazard, PPE, and emergency response guidance, refer to the Safety Data Sheet (SDS) for this product. The SDS controls in all cases where guidance differs.

TEST METHODS

PARAMETER	METHOD	AUTHORITY	UNIT
Acid Value	Titration	—	mg KOH/g
Arsenic	ICP-MS	—	ppm
Ash	Ignition	—	%
Assay	GC or density	—	%
Calcium	Per specification	—	%
Carbonate	Titration	—	%

PARAMETER	METHOD	AUTHORITY	UNIT
Chloride	Ion chromatography	—	ppm
Color	APHA	—	APHA
Heavy Metals	ICP	—	ppm
Insoluble	Per specification	—	%
Iron	ICP-OES	—	ppm
Lead	ICP-MS	—	ppm
Mercury	ICP-MS	—	ppm
Particle Size	Sieve Analysis	—	µm
Phosphate	Per specification	—	ppm
Residue	Ignition	—	%
Sulfate	Ion chromatography	—	ppm
Turbidity	EPA 180.1	—	NTU
Water	Karl Fischer	—	%

Methods listed are those used to generate the referenced COA. Equivalent or compendial methods may be substituted with documented bridging.

REVISION HISTORY

Last reviewed 2026-05-20 by Hossein Taki, Vice President (Vice President, Alliance Chemical · CAGE Code 1LT50 · DOT Hazmat Registrant #2188383).

VERSION	DATE	CHANGE	TRIGGER
1.0	2026-05-20	Initial URL—first TDS published from canonical chemistry registry.	initial

This Technical Data Sheet is provided for technical reference. The Safety Data Sheet (SDS) controls in all cases where guidance differs. Values reflect Alliance Chemical canonical data at time of generation; subsequent revisions are recorded in the Revision History above.

ALLIANCE CHEMICAL

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