

Section 1: Product & Company Information

Product Identifier: Citric Acid Anhydrous, Technical Grade

Other Means of Identification

Product Number: 110014

Recommended Use and Restrictions on Use

Recommended Use: Industrial applications and laboratory use.

Restrictions on Use: None specified.

Manufacturer / Importer / Supplier / Distributor Information

Company Name: CORECHEM Inc.

Address: 4320 Greenway Drive
Knoxville, TN 37918 USA

Information Telephone Number: 1-865-524-4239

Fax Number: 1-865-524-3375

Website: www.corecheminc.com

Contact Person: Regulatory Manager

E-mail: regulatory@corecheminc.com

Emergency Phone Number: Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 (monitored 24 hours/day)

Section 2: Hazards Identification

GHS Hazard Classification(s)

In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Physical Hazard(s)

Not classified.

Health Hazard(s)

(Corrosion) Damage/Irritation, Eye - 2A

Environmental Hazard(s)

Not classified.

Label Elements

Signal Word

WARNING

Hazard Symbol(s)



Hazard Statement(s)

H319: Causes serious eye Irritation.

Precautionary Statements

General

Not applicable.

Prevention

P264: Wash face, hands and any exposed skin thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response

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.

Storage

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

P403 + P235: Store in a well-ventilated place. Keep cool.

P405: Store locked up.

Disposal

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC)

None known.

Section 3: Composition/Information on Ingredients

Substance

Chemical Identity ²	Common Name/Synonym(s)	CAS # ³	Weight %	Impurity or Stabilizing Additive
Citric Acid Anhydrous		77-92-9	≥ 99.5%	-

- Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
- Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
- "—"Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

Section 4: First-Aid Measures

General Information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

Inhalation

If product dust or vapor causes respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen; if respiratory arrest occurs, start artificial respiration by trained personnel. If unconscious, maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Seek medical attention if symptoms persist or if the victim feels unwell.

Skin Contact

Flush skin with large amounts of water while removing contaminated clothing. Wash the affected area with soap and water followed by thorough rinsing. Wash contaminated clothing and shoes before reuse. If irritation persists or the victim feels unwell, seek medical attention.

Eye Contact

DO NOT RUB EYES. Immediately flush eyes with large amounts of water or saline solution for at least 15 minutes, occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do after first 2 minutes and continue rinsing. If irritation persists seek medical attention, preferably from an ophthalmologist.

Ingestion

Rinse mouth with water if the victim is conscious. Remove dentures if present. Give 1-2 cupfuls of milk or water to drink if victim is conscious, alert, able to swallow, and not experiencing breathing difficulty. DO NOT induce vomiting unless directed to do so by medical personnel. Vomiting may occur spontaneously. To prevent aspiration of material into the lungs, lay the victim on one side with the head lower than the waist. Never give anything by mouth to an unconscious or convulsing person. Do not leave the victim unattended. Seek immediate medical attention.

Most important symptoms/effects, acute and delayed

Symptoms

Eyes: Causes serious eye irritation. Symptoms may include redness, swelling, pain, tearing, and possible burns. Particulates can cause mechanical abrasion of the cornea.

Skin: May cause skin irritation with localized redness, itching, and discomfort. May cause an allergic skin reaction and sensitization, which becomes evident upon re-exposure to this material.

Inhalation: May cause irritation of the nose, throat, and upper respiratory tract with headache, sore throat, cough, and shortness of breath.

Ingestion: Causes severe irritation of the gastrointestinal tract with nausea, vomiting, abdominal pain, diarrhea, and possible burns. Excessive intake of citric acid may cause erosion of teeth.

Chronic: Individuals with pre-existing skin conditions may be more susceptible to the effects of this product. Prolonged or repeated skin contact may cause sensitization dermatitis.

Indication of immediate medical attention and special treatment needed

Hazards

No data available.

Treatment

Treat symptomatically. Symptoms may be delayed.

Section 5: Fire-Fighting Measures

General Fire Hazards

In case of fire and/or explosion do not breathe fumes. Use water spray to keep fire-exposed containers cool. Move containers from fire area if you can do so without risk. Water may be ineffective in fighting the fire. Fight fire from a protected location.

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media

Use extinguishing media suitable for the surrounding fire.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Chemical

Closed containers may rupture due to the buildup of pressure when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Obtain medical attention.

Explosion hazards: This material is not considered to be an explosion hazard.

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. If possible, water contaminated by this material should be contained from being discharged to any waterway, sewer, or drain to prevent environmental contamination.

Special Protective Equipment for Fire-Fighters

As in any fire, wear self-contained breathing apparatus pressure-demand (OSHA/NIOSH approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Evacuate non-essential personnel. Wear appropriate protective clothing and equipment designated in Section 8.2. Ventilate the area. No smoking. Avoid dust generation and accumulation. Clean up spills immediately.

Methods and Materials for Containment and Clean-Up

Approach spill from upwind direction. Do not flush large spills down the drain. Cover drains and contain spill. Minimize dust generation during cleanup. Carefully collect material and place into an approved container for proper disposal. Observe possible material restrictions (Sections 7.2 and 10.5). Clean contaminated area with soap and water. Do not allow material or runoff from rinsing contaminated areas to enter floor drains or storm drains and ditches that lead to waterways. Dispose of material via a licensed waste disposal contractor.

Notification Procedures

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions

Avoid dispersal of spilled material or runoff and prevent contact with soil and entry into drains, sewers, or waterways.

Section 7: Handling and Storage

Precautions for Safe Handling

Wear all appropriate personal protective equipment specified in Section 8.2. Avoid dust generation and accumulation during storage and handling. Do not get in eyes or on skin or clothing. Do not breathe dust. Do not rub eyes. No smoking. If normal use of material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator. Wash contaminated clothing and shoes thoroughly before reuse.

Conditions for Safe Storage, including any Incompatibilities

Store in dry, well-ventilated areas away from incompatible materials (see Section 10.5), food, and drink. Transfer only to approved containers having correct labeling. Hygroscopic material! Keep container tightly closed when not in use to prevent moisture absorption. Protect containers from physical damage. Containers that have been opened must be carefully resealed and kept upright to prevent spillage. Containers are hazardous when empty as they contain product residues. Use appropriate containment to avoid environmental contamination. Ventilate closed areas. Keep out of reach of children.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Occupational Exposure Limits

The product does not contain any relevant quantities of hazardous materials with critical values that have to be monitored in the workplace.

Biological Limit Values

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

Appropriate Engineering Controls

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Use adequate ventilation. Local exhaust is preferable.

Individual protection measures, such as personal protective equipment (PPE)

General Information

Wear protective clothing to prevent repeated or prolonged contact with product. Protective clothing needs to be selected specifically for the workplace, depending on the concentrations and quantities of hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the representative supplier.

Eye/Face Protection

Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

Skin Protection

Hand Protection

Wear gloves made of butyl, nitrile, or natural rubber, or those recommended by glove supplier for protection against materials in Section 3. Gloves should be impermeable to chemicals and oil. Breakthrough time of selected gloves must be greater than the intended use period.

Other

Wear appropriate chemical resistant clothing. Wear protective boots if the situation requires.

Respiratory Protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information

Hygiene Measures

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

Section 9: Physical and Chemical Properties

Appearance:

Physical State: Crystalline / Powder
Color: White.

Odor:

Odorless.

Odor Threshold:

No data available.

pH:

1.75

Melting Point/Freezing Point:

153°C (307.4°F) @ 1,013 hPa [approx.]

Initial Boiling Point and Boiling

Decomposes before boiling.

Range:

Flash Point:

No data available.

Evaporation Rate (butyl acetate=1):

< 1

Flammability (solid, gas):

Nonflammable.

Upper/Lower Limit on Flammability or Explosive Limits

Flammability Limit – Upper: No data available.

Flammability Limit – Lower: No data available.

Explosive Limit – Upper: Not applicable.

Explosive Limit – Lower: Not applicable.

Vapor Pressure:

No data available.

Vapor Density (air =1):

No data available.

Relative Density (water=1):

No data available.

Solubility(ies):

Solubility in water: 750 g/l @ 20°C

Solubility (other): No data available.

Partition coefficient (n-octanol/water):

log Pow = -1.72

Auto-Ignition Temperature:

No data available.

Decomposition Temperature:

No data available.

Viscosity:

No data available.

Other Information:

Molecular Weight: 192.12 g/mol
Formula: C₆H₆O₇

Section 10: Stability and Reactivity

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical Stability

This material is stable under recommended conditions of storage and handling. Hygroscopic material (absorbs moisture from the air).

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to Avoid

Avoid dust generation and accumulation, exposure to moist air or water, and contact with incompatible materials. Corrosive to copper, zinc, aluminum, and their alloys.

Incompatible Materials

Oxidizing agents, sulfides, metal nitrates, alkalis, alkali carbonates and bicarbonates, acetates, potassium tartrate.

Hazardous Decomposition Products

Thermal decomposition products include oxides of carbon.

Section 11: Toxicological Information

Information on routes of exposure

Ingestion: No data available.

Inhalation: No data available.

Skin Contact: May cause skin irritation.

Eye Contact: Causes severe eye irritation.

Information on Toxicological Effects

Acute Toxicity (List all possible routes of exposure)

Oral

LD50, rat: > 3,000 mg/kg

Dermal

LD50, rabbit: > 2,360 mg/kg

Inhalation

No data available.

Repeated Dose Toxicity

No data available.

Skin Corrosion/Irritation

May cause skin irritation.

Serious Eye Damage/Eye Irritation

Causes severe eye irritation.

Respiratory/Skin Sensitization

May cause allergic skin reaction in a small percentage of the population.

Carcinogenicity

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

US. National Toxicology Program (NTP) Report on Carcinogens

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Germ Cell Mutagenicity

In Vitro

No mutagenic components identified.

In Vivo

No mutagenic components identified.

Reproductive Toxicity

None known.

Specific Target Organ Toxicity – Single Exposure

May cause respiratory irritation.

Specific Target Organ Toxicity – Repeated Exposure

None known.

Aspiration Hazard

Not classified.

Other Effects

None known.

Section 12: Ecological Information**Ecotoxicity****Acute Hazards to the Aquatic Environment****Fish**

LC50 - Leuciscus idus (Golden orfe), static, 96 h: > 440 - 760 mg/l

LC50 - Lepomis macrochirus (Bluegill Sunfish), static, 96 h: 1,516 mg/l

Aquatic Invertebrates

EC50 - Daphnia magna (water flea), 72 h: 120 mg/l

Toxicity to Aquatic Plants

No data available.

Chronic Hazards to the Aquatic Environment**Fish**

No data available.

Aquatic Invertebrates

No data available.

Toxicity to Aquatic Plants

No data available.

Persistence and Degradability**Biodegradation**

This substance is expected to biodegrade over time.

BOD/COD Ratio

No data available.

Bioaccumulative Potential**Bioconcentration Factor (BCF)**

This product will not bioaccumulate.

Partition Coefficient n-octanol / water (log Kow)

No data available.

Mobility in Soil

This product has high mobility in soil.

Other Adverse Effects

Do not allow material to enter surface waters, wastewater, or soil.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13: Disposal Considerations**Disposal Instructions**

The generation of waste should be avoided or minimized whenever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions, and any by-products should always comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains, and sewers.

Contaminated Packaging

Handle contaminated packages in the same way as the substance itself. Emptied containers may retain hazardous residue and explosive vapors. Keep away from heat, sparks, and flames. Do not cut, puncture, or weld on or near this container. Follow label warnings until container is thoroughly cleaned or destroyed.

Section 14: Transportation Information**US Department of Transportation (DOT)**

This material is not regulated as a hazardous material for transport by the U.S. Department of Transportation in accordance with 49 CFR 172.101.

Section 15: Regulatory Information**US Federal Regulations****Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)**

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

No chemical(s) in this material are subject to the reporting requirements of CERCLA.

Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

Emergency Planning and Community Right-To-Know Act (EPCRA)

EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard: No
Sudden Release of Pressure: No
Reactive: No
Acute (Immediate) Health Hazard: Yes
Chronic (Delayed) Health Hazard: No

EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

This material does not contain any chemical(s) with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

Section 16: Other Information

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 2
Chronic Health Hazard: /
Flammability: 0
Physical Hazard: 0
Personal Protection: C

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

National Fire Protection Association (NFPA 704) Rating

Health Hazard: 2
Fire Hazard: 0
Reactivity Hazard: 0
Special: N/A

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

Prepared By: Regulatory Assistant C

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Key to Abbreviations and Acronyms

ATE - Acute Toxicity Estimate
BCF - Bioconcentration Factor
EC50 - Effective concentration, 50%
IDHL - Immediately Dangerous to Life and Health
Kg - Kilogram
l - Liter
lb - Pound
LC50 - Lethal Concentration, 50%
LD50 - Lethal Dose, 50%
mg - milligram
ml - milliliter
N/A - Not Applicable
N/D - Not Determined
PEL - Permissible Exposure Limit
REL - Recommended Exposure Limit
STEL - Short-term Exposure Limit
TWA - Time weighted average

ACGIH - American Conference of Industrial Hygienists
AIHA - American Industrial Hygiene Association
BEI - Biological Exposure Indices
CAS - Chemical Abstracts Service
DOT - US Department of Transportation
EPA - US Environmental Protection Agency
GHS - Globally Harmonized System of Classification and Labelling of Chemicals
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IBC - Intermediate Bulk Container
IMDG - International Maritime Dangerous Goods
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - US Occupational Health and Safety Administration
SARA - US EPA Superfund Amendments and Reauthorization Act
TSCA - US EPA Toxic Substances Control Act
UN - United Nations

References

HSDB® - Hazardous Substances Data Bank

Disclaimer

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