



**SILVER FERN**  
CHEMICAL INC

# Citric Acid Anhydrous SAFETY DATA SHEET

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH); 1272/2008 & 453/2010 (CLP)

Version: 1  
Date: 15/08/2014

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

### 1.1 Product identifier

Chemical Name	Citric acid
Trade name	Citric acid anhydrous
CAS No.	77-92-9
EINECS No.	201-069-1
REACH Registration No.	01-2119457026-42-0014

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified use(s)	Used as a sour agent, buffering agent and antioxidant in the food industry; a correctant in pharmaceutical industry; used in detergents, buffering and chelating, sizing and as a sequestrant.
Uses advised against	No uses advised against.

### 1.3 Details of the supplier and of the safety data sheet

Silver Fern Chemical, Inc. 2226 Queen Anne Avenue North, Suite B Seattle, WA 98109 USA Telephone: 1-866-282-3384	Business Contact: Customer Service: 1-866-282-3384 info@silverfernchemical.com
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### 1.4 Emergency telephone number:

INFO-TRAC +1-800-535-5053; Outside USA & Canada +1-352-323-3500

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

2.1. Regulation (EC) No. 1272/2008 (CLP)	Warning H319: Causes serious eye irritation
2.1. Directive 67/548/EEC & Directive 1999/45/EC	Xi; Irritant R36

### 2.2 Label elements

#### 2.2.1 According to Regulation (EC) No. 1272/2008 & 453/2010 (CLP)

Hazard Pictogram



Signal word(s)  
Hazard statement(s)  
Precautionary statement(s)

Warning  
H319: Causes serious eye irritation  
P264. Wash hands thoroughly after handling.  
P280 Wear eye 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.

#### 2.2.2 According to Directive 67/548/EEC & Directive 1999/45/EC

Hazard Symbol



Risk Phrases  
Safety Phrases

Irritant  
R36. Irritating to eye  
S26. Avoid contact with eyes. In case of contact with eyes, immediately with plenty of water and seek medical advice

### 2.3 Other hazards

Not known

### 2.4 Additional Information

Not known



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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substance

<u>Composition</u>	<u>%W/W</u>	<u>EC</u>	<u>CAS</u>	<u>North American Hazard Indicator</u>
Citric acid	99.5 –100.5	201-069-1 7	7-92-9	OSHA / GHS: Eye Irrit. 2; WHMIS: E.

3.2 Mixture. Not applicable

## SECTION 4: FIRST AID MEASURES



### 4.1 Description of first aid measures

<b>Inhalation</b>	Move to fresh air.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. If irritation persists, call a physician.
<b>Eye Contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
<b>Ingestion</b>	Do NOT induce vomiting. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

Serious eye damage/eye irritation: Eye Irrit. 2

### 4.3 Indication of immediate medical attention and special treatment needed

Consult a physician.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1 Extinguishing Media

<b>5.1.1 Suitable Extinguishing Media</b>	Use alcohol-resistant foam, carbon dioxide, dry powder or water fog.
<b>5.1.2. Unsuitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture  
Oxides of carbon

5.3 Advice for fire-fighters  
In the event of fire, wear self-contained breathing apparatus and wear suitable protective clothing. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations

5.4 Additional information  
Explosion hazard from the generation of dust.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

<b>6.1 Personal precautions, protective equipment and emergency procedures</b>	Use personal protective equipment.
<b>6.2 Environmental precautions</b>	Do not flush substance into surface water or sewage system.
<b>6.3 Methods and material for containment and cleaning up</b>	Sweep up or vacuum up spillage and collect in suitable container for disposal.
<b>6.4 Reference to other sections</b>	Section 8
<b>6.5 Additional Information</b>	Not known

## SECTION 7: HANDLING AND STORAGE

<b>7.1 Precautions for safe handling</b>	Avoid contact with skin and eyes. Use only in well-ventilated areas. Do not breathe vapours/dust
<b>7.2 Conditions for safe storage, including any incompatibilities</b>	Keep locked up or in an area accessible only to qualified staff
<b>Storage</b>	Store in tightly closed original container in a dry, cool and well ventilated place.



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## Incompatible materials

Keep in original container.  
Strong oxidising substances, strong alkalis.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

8.1 Occupational Exposure Limits No values

8.1 Biological limit value No values

.2 assigned

### 8.2 PNECs and DNELs

#### DNELs - Health

No true DNEL for systemic toxicity can be derived. Local effects irritation should be considered.

#### PNEC/PEC – Environment

Compartment	PN
Aquatic PNEC aqua – freshwater (mg/l)	0.465
PNEC aqua – marine water (mg/l)	0.0465
PNEC freshwater-sediment (mg/kg d.w.)	3.52. (Equivalent to 0.752 mg/kg wwt)
The PNEC marine-sediment mg/kg d.w.	35.2. (Equivalent to 7.52 mg/kg wwt)
Terrestrial (PNEC soil mg/kg d.w.)	34.2
Sewage treatment plant PNEC STP (mg/l)	>1050
Atmospheric Compartment	Not applicable

### 8.3 Exposure controls

Minimise the risk of dust

#### 8.3.1 Appropriate engineering controls

Provide adequate ventilation.

#### 8.3.2 Personal protection equipment

##### Eye/face protection

Safety glasses with side-shields



##### Skin protection (Hand protection/ Other)

Avoid contact with skin, eyes and clothing. Wash hands before breaks and at the end of workday. Protective gloves must satisfy the specifications of EU Directive 89/686/EEC and EN 374



##### Respiratory protection

Provide adequate ventilation. Wear respirator where dust level exceeds 10 mg/m3.



##### Thermal hazards

Not applicable

#### 8.3.3 Environmental Exposure Controls

Do not allow to enter drains, sewers or watercourses

#### 8.3.4 Hygiene measures

Do not smoke in the work area. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	Solid, crystalline
Colour	White
Odour	Odourless
pH (Value)	1.75(100g/l)
Melting Point	Approx. 153 °C at 1,013 hPa
Boiling point/boiling range (°C):	Decomposes before boiling
Flash Point (°C)	Not known



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Flammability	Non flammable
Density	1.542 g/cm <sup>3</sup> at 20°C
Solubility (Water)	750 g/L at 20°C
Solubility (Other)	Soluble in alcohol
Partition Coefficient (Log Kow: -n-Octanol/water)	-0.1 to -1.7
Decomposition Temperature (°C)	Not known
Explosive properties	Not explosive
Oxidising properties	Not oxidising
<b>9.2 Other information</b>	The fraction below 100 µm = 84.1%; the D50 of the fraction below 100 µm = at 31.99 µm.
Granulometry	pKa: 3.13, 4.76 and 6.4 at 25°C
Dissociation constant	

## SECTION 10: STABILITY AND REACTIVITY

<b>10. Reactivity</b>	Reacts with alkaline
<b>10. Chemical stability</b>	Stable under normal
<b>10. Conditions to avoid</b>	Exposure to heat and
<b>10. Incompatible materials</b>	Sodium nitrite, potassium
<b>10. Hazardous Decomposition</b>	Oxides of carbon.
<b>5 Product(s)</b>	

## SECTION 11: TOXICOLOGICAL INFORMATION

<b>11.1 Information on toxicological effects</b>	
<b>11.1. Substances</b>	
<b>Acute toxicity</b>	
<b>Ingestion LD50 (mouse)</b>	5050 mg/kg bw
<b>Inhalation</b>	No data
<b>Skin Contact. LD50 (dermal):</b>	>1845 mg/kg bw
<b>Skin corrosion/irritation</b>	Mild skin irritant
<b>Eye Contact</b>	Irritating
<b>Respiratory or skin sensitization –</b>	Not a sensitizer
<b>Mutagenicity</b>	Not a mutagen
<b>Carcinogenicity</b>	Not a carcinogen
<b>Reproductive toxicity</b>	Not a reproductive
<b>STOT - single exposure</b>	Not known
<b>STOT - repeated exposure</b>	Not known
<b>Aspiration hazard</b>	Not known
<b>11.2 Other information</b>	Not known

## SECTION 12: ECOLOGICAL INFORMATION

<b>12.1 Toxicity</b>	
<b>12.1.1 Fish LC50 (48hr)</b>	415 mg/l
<b>12.1.2 D. Magna LC 50 (24hr)</b>	1460 mg/l
<b>12.1.3 Algae NOEC (8 d mat. (nominal) based on cell density)</b>	408 mg/l
<b>12.2 Persistence and degradability</b>	Biodegradable
<b>12.3 Bioaccumulative potential</b>	No expected to bioaccumulate
<b>12.4 Mobility in soil</b>	Not applicable
<b>12.5 Results of PBT and vPvB assessment</b>	Not a PBT or a vPvB
<b>12.6 Other adverse effects</b>	Not known

## SECTION 13: DISPOSAL CONSIDERATIONS

<b>13.1 Waste treatment methods</b>	Disposal to licensed waste disposal site in accordance with local Waste Disposal
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**13.2 Additional Information**

Authority:  
Not known

## SECTION 14: TRANSPORT INFORMATION

<b>14.1 Land transport (ADR/RID)</b>	Not subject to transport regulations.
<b>14.2 Sea transport (IMDG)</b>	Not subject to transport regulations.
<b>14.3 Air transport (ICAO/IATA)</b>	Not subject to transport regulations.
<b>14.4 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not known

## SECTION 15: REGULATORY INFORMATION

<b>15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture substance or mixture</b>	
<b>15.1.1 EU regulations</b>	User to follow EU directives and regulations
<b>Authorisations and/or restrictions on use</b>	Not applicable
<b>15.1.2 National regulations</b>	User to follow national regulations

## SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: Version 1.

### LEGEND

LTEL	Long Term Exposure Limit
STEL	Short Term Exposure Limit
STOT	Specific Target Organ Toxicity
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration

### References:

Chemical Safety Report for citric acid and citrates  
Regulation (EC) No. 1272/2008 & 453/2010 (CLP)  
Directive 67/548/EEC & Directive 1999/45/EC

### Risk Phrases and Safety Phrases

R36: Irritating to eyes

S26: Avoid contact with eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

### Hazard statement(s) and Precautionary statement(s)

H319: Causes serious eye irritation

P264: Wash hands thoroughly after handling.

P280: Wear eye 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.

**Training advice:** Ensure staff and workers receive adequate training with regular updates in the handling of chemicals

**Additional Information.** Not known

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