



Safety Data Sheet

Citric Acid

October 8th, 2015

Section 1: Chemical Product and Company Identification

Product name: Citric Acid
Contact Info: Bramble Berry Inc.
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1-877-627-7883

Emergency Phone Number:
Within USA & Canada: 1.800.424.9300 CCN693143
Outside USA & Canada: +1.703.527.3887 (collect calls accepted)

Section 2: Hazards Identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Eye irritation, Category 2 **H319:** Causes serious eye irritation.

Classification (67/548/EEC, 1999/45/EC)

Irritant **R36:** Irritating to eyes.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Signal word: Warning

Hazards statements:

H319 Causes serious eye irritation.

Precautionary statements:

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/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 + 9313 If eye irritation persists: Get medical advice/attention.

2.3 Other Hazards

Section 3: Composition/Information on Ingredients

3.1 Substances

Substance name	CAS-No.	Concentration [%]
Citric acid anhydrous	77-92-9	100

Section 4: First Aid Measures

4.1 Description of first aid measures

General advice: Get medical advice/attention if you feel unwell.

Show this safety data sheet to the doctor in attendance.

If inhaled: If breathed in, move person into fresh air.

In case of skin contact: Immediately flush skin with large amounts of water.

In case of eye contact: Remove contact lenses. Rinse immediately with plenty of water, also under the eyelids.

If swallowed: Drink plenty of water. If swallowed, DO NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: No information available

Section 5: Fire-Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media: Water spray, Dry powder, Foam, Carbon dioxide (CO₂)

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting: Do not use a solid water stream as it may scatter and spread fire. Hazardous decomposition products formed under fire conditions. Exposure to decomposition products may be a hazard to health.

5.3 Advice for firefighters

Special protective equipment for firefighters: Wear self-contained breathing apparatus for fire-fighting if necessary. Use personal protective equipment

Further information: Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. In the event of fire and/or explosion do not breathe fumes.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation, especially in confined areas.

6.2 Environmental precautions

Environmental precautions: Prevent further leakage or spillage if safe to do so. No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up: Use mechanical handling equipment. Keep in suitable, closed containers for disposal. Clean contaminated surface thoroughly.

6.4 Reference to other sections

No conditions to be specially mentioned.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Advice on safe handling: Avoid creating dust. Do not breathe dust. Avoid contact with skin and eyes.

Advice on protection against fire and explosion: Normal measure for preventive fire protection.

Dust explosion class: St1

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Keep in an area equipped with acid resistant flooring. Keep container tightly closed in a dry and well-ventilated place.

Further information on storage conditions: Do not store at temperatures above 30°C/86°F

Advice on common storage: Incompatible with strong bases and oxidizing agents.

Other date: No decomposition if stored and applied as directed.

7.3 Specific end uses

Section 8: Exposure Controls/Personal Protection

8.1 Control parameters: Contains no substances with occupational exposure limit values.

PNEC: Water Value: 440 mg/l

PNEC: Fresh water sediment Value: 34,6 mg/kg

PNEC: Marine sediment Value: 3,46 mg/kg

PNEC: Soil Value: 33,1 mg/kg

8.2 Exposure controls

Engineering measures: Provide adequate ventilation.

Personal protective equipment

Respiratory protection: In the case of dust or aerosol formation use respirator with an approved filter. Half mask with a particle filter P2 (EN 143)

Hand protection: Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer.

Eye protection: Safety glasses.

Skin and body protection: Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. General industrial hygiene practice. Do not breathe dust. Avoid contact with skin, eyes and clothing.

Environmental exposure controls

General advice: Prevent further leakage or spillage if safe to do so. No special environmental precautions required.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance: crystalline

Color: white

Odor: odorless

Flash point: not applicable

Flammability (solid, gas): does not ignite

Oxidizing properties: no oxidizing effect

Molecular Weight: 192, 13 g/mol

pH: 1,8 at 5% 25 °C

Melting point/range: ca. 153 °C

Density: 1,665 g/cm³ at 20 °C

Water solubility: ca. 800 g/l at 20 °C

Partition coefficient: log Pow: -1,72

n-octanol/water: log Pow: -1,8 - -0,2 Calculation

9.2 Other information

Section 10: Stability and Reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions: None known

10.4 Conditions to avoid

Conditions to avoid: Avoid dust formation.

10.5 Incompatible materials

Materials to avoid: Strong bases, Oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products: Build-up of dangerous/toxic fumes possible in cases of fire/high temperature.

Section 11: Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity, Citric acid anhydrous:

LD50 Oral: 5.400 mg/kg

Species: mouse

Method: OECD Test Guideline 401

LD50 Oral: 11.700 mg/kg

Species: rat

Method: OECD Test Guideline 401

Acute dermal toxicity, Citric acid anhydrous:

LD50 Dermal: > 2.000 mg/kg

Species: rat

Acute toxicity (other routes of administration), Citric acid anhydrous:

LD50: 725 mg/kg

Application Rout: i.p.

Species: rat

LD50: 940 mg/kg

Application Route: i.p.

Species: mouse

Skin corrosion/irritation

Skin irritation, Citric acid anhydrous:

Species: rabbit

Result: No skin irritation. May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation

Eye irritation, Citric acid anhydrous:

Species: rabbit

Result: Irritating to eyes. Respiratory or skin sensitization

Sensitization, Citric acid anhydrous:

Maximization Test

Species: guinea pig

Result: Does not cause skin sensitization

Method: OECD Test Guideline 406

Germ cell mutagenicity

Assessment, Citric acid anhydrous: In vivo tests did not show mutagenic effects

Carcinogenicity

Assessment, Citric acid anhydrous: Did not show carcinogenic or teratogenic effects in animal experiments.

Reproduction Toxicity

Assessment Citric acid anhydrous: No toxicity to reproduction

Target Organ Systemic Toxicant – Repeated exposure

Section 12: Ecological Information

12.1 Toxicity

Toxicity to fish, Citric acid anhydrous:

LC50: 440 mg/l

Exposure time: 48 h

Species: Leuciscus idus (Golden orfe)

Static Test

Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates, Citric acid anhydrous:

LC50: 1.535 mg/l

Exposure time: 24 h

Species: Daphnia magna (Water flea)

Static Test

Toxicity to algae, Citric acid anhydrous:

425 mg/l

Exposure time: 168 h

Species: Scenedesmus quadricauda (Green algae)

static test

Toxicity to bacteria, Citric acid anhydrous:

> 10.000 mg/l

Exposure time: 16 h

Species: Pseudomonas putida

12.2 Persistence and degradability

Biodegradability, Citric acid anhydrous:

97%

Testing period: 28 d

Method: OECD Test Guideline 301B

Readily biodegradable.

100%

Testing period: 19 d

Method: OECD Test Guideline 301E

Readily biodegradable

Biochemical Oxygen Demand (BOD), Citric acid anhydrous:

526 mg/g

Chemical Oxygen Demand (COD), Citric acid anhydrous:

728 mg/g

12.3 Bioaccumulative potential

Bioaccumulation, Citric acid anhydrous: The product is miscible in water and readily biodegradable in both water and soil. Accumulation is not expected.

12.4 Mobility in soil

12.5 Results of PBT and vPvB assessment

Citric acid anhydrous: This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)

12.6 Other adverse effects

Section 13: Disposal Conditions

13.1 Waste treatment methods

Product: Where possible recycling is preferred to disposal or incineration. Can be landfilled or incinerated, when in compliance with local regulations. Waste codes should be assigned by the user based on the application for which the product was used. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Dispose of as unused product.

Section 14: Transport Information

ADR: Not dangerous goods

DOT: Not a Hazardous Material

TDG: Not dangerous goods

IATA: Not dangerous goods

IMDG: Not dangerous goods

RID: Not dangerous goods

Section 15: Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Major Accident Hazard Legislation: 96/82/EC Update: 2003

Directive 96/82/EC does not apply

Notification status

CERCLA: Not considered hazardous



SARA Title III: Not considered hazardous

WHMIS: Class E

TSCA: On TSCA Inventory

EINECS: On the inventory, or in compliance with the inventory

AICS: On the inventory, or in compliance with the inventory

DSL: All components of this product are on the Canadian DSL list

ENCS: On the inventory, or in compliance with the inventory

KECI: On the inventory, or in compliance with the inventory

PICCS: On the inventory, or in compliance with the inventory

IECSC: On the inventory, or in compliance with the inventory

NZIoC: On the inventory, or in compliance with the inventory

15.2 Chemical Safety Assessment

Section 16: Other Information

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