



Citric acid

Safety Data Sheet

1. IDENTIFICATION

Product identifier

Product code: CG6002
Product Name: Citric acid

Other means of identification

Synonyms: 2-Hydroxy-1,2,3-propanetricarboxylic acid
CAS #: 77-92-9
RTECS # GE7350000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: DAWN N SHINE
121 Liberty street Metuchen, NJ 08840
T: 732-902-6300, F : 973-802-1005
www.dawn-n-shine.com | sales@dawnnshine.com

Emergency telephone number Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

| | |
|--|-------------|
| Serious eye damage/eye irritation | Category 2A |
| Specific target organ toxicity (single exposure) | Category 3 |

Label elements

Warning

Hazard statements

Causes serious eye irritation
May cause respiratory irritation



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

May be harmful if swallowed
Causes mild skin irritation

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Wear eye/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
If skin irritation occurs: Get medical advice/attention
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed
Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Weight % |
|------------------------|---------|----------|
| Citric Acid, Anhydrous | 77-92-9 | 100 |

4. FIRST AID MEASURES

First aid measures

General Advice: National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops. Consult a physician if necessary.

Eye Contact: Flush eyes with water for 15 minutes. Get medical attention.

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

Symptoms
Causes eye irritation
Mild skin irritation
May cause irritation of respiratory tract
Central nervous system effects
May affect the cardiovascular system
May affect respiration

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Carbon dioxide (CO₂). Dry chemical. Water spray mist or foam.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products: Carbon oxides

Hazardous Combustion Products: No information available.

Specific hazards: May be combustible at high temperatures. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Special Protective Actions for Firefighters

Specific Methods: No information available.

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Remove all sources of ignition.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Avoid dust formation. Do not ingest. Do not breathe dust. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents
Reducing agents
Bases
Bicarbonates
Acetates
Sulfides
Potassium Tartrate
metal nitrates
Metals
Aluminum
Copper
Copper alloys
Zinc
zinc alloys
aluminum alloys
Alkaline earth carbonates
alkali earth carbonates

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

| Components | CAS-No. | OSHA | NIOSH | ACGIH | AIHA WEEL |
|------------------------|---------|------|-------|-------|-----------|
| Citric Acid, Anhydrous | 77-92-9 | None | None | None | None |

Canada

| Components | CAS-No. | Canada - Alberta | Canada - British Columbia | Canada - Ontario | Canada - Quebec |
|------------------------|---------|------------------|---------------------------|------------------|-----------------|
| Citric Acid, Anhydrous | 77-92-9 | None | None | None | None |

Australia and Mexico

| Components | CAS-No. | Australia | Mexico |
|------------------------|---------|-----------|--------|
| Citric Acid, Anhydrous | 77-92-9 | None | None |

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection:

Goggles or Safety glasses with side-shields

Skin and body protection:

Long sleeved clothing
Chemical resistant apron
Gloves

Respiratory protection:

Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds), inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures:

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:

Solid

Appearance:

Powder. Granular.

Color:

Colorless. White.

Odor:

Odorless.

Taste

Acid. Strong.

Formula:

C₆H₈O₇

| | | |
|---|--|---|
| Molecular/Formula weight (g/mole): 192.13 | Flammability: No information available | Flashpoint (°C/°F): No information available. |
| Flash Point Tested according to: Not available | Autoignition Temperature (°C/°F): 1010°C/1850°F (poudre) | Lower Explosion Limit (%): 0.28 kg/m ³ (poussière) |
| Upper Explosion Limit (%): 2.29 kg/m ³ (poussière) | Melting point/range(°C/°F): 153.0°C/307.4°F | Decomposition temperature(°C/°F): No information available |
| Boiling point/range(°C/°F): se dégrade | Bulk density: No information available | Density (g/cm³): No information available |
| Specific gravity: 1.665 | pH: No information available | Vapor pressure @ 20°C (kPa): No information available |
| Evaporation rate: No information available | Vapor density: No information available | VOC content (g/L): No information available |
| Odor threshold (ppm): No information available | Partition coefficient (n-octanol/water): -1.64 | Viscosity: No information available |
| Miscibility: No information available | Solubility: Soluble in Water Solubility in water: 54.0% w/w at 10 deg C; 59.2% at 20 deg C; 64.3% at 30 deg C; 68.6% at 40 deg C; 70.9% at 50 deg C; 73.5% at 60 deg C; 76.2% at 70 deg C; 78.8% at 80 deg C; 81.4% at 90 deg C; 84.0% at 100 deg C., 3.83X10+5 mg/L at 25 deg C. Very soluble in Ethanol Soluble in Ether Soluble in ethyl acetate Insoluble in Benzene Insoluble in Chloroform | |

10. STABILITY AND REACTIVITY

Reactivity

Reacts with strong bases
 Reactive with oxidizing agents
 Reacts with reducing agents
 Potentially explosive reaction with metal nitrates

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Incompatible materials. Avoid dust formation. Dust may form explosive mixture in air. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Incompatible Materials: Oxidizing agents
 Reducing agents
 Bases

Bicarbonates
 Acetates
 Sulfides
 Potassium Tartrate
 metal nitrates
 Metals
 Aluminum
 Copper
 Copper alloys
 Zinc
 zinc alloys
 aluminum alloys
 Alkaline earth carbonates
 alkali earth carbonates

Hazardous decomposition products:

Carbon oxides.

Other Information

Corrosivity:

Corrosive in presence of aluminum, zinc, copper and their alloys

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Ingestion. Inhalation.

Acute Toxicity

Component Information

| | |
|------------------------|---------|
| Citric Acid, Anhydrous | |
| CAS-No. | 77-92-9 |

LD50/oral/rat = 3 g/kg Oral LD50 Rat = 3000 mg/kg Oral LD50 Rat
LD50/oral/mouse = 5040 mg/kg Oral LD50 Mouse
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = 903 mg/kg, intraperitoneal, mouse;
 290 mg/kg, intraperitoneal, rat;
 42 mg/kg, intravenous, mouse;
 330 mg/kg, intravenous, rabbit;
 2700 mg/kg, subcutaneous, mouse;
 5500 mg/kg, subcutaneous, rat

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = 3000 mg/kg

LD50/oral/mouse =

Value - Acute Tox Oral = 5040 mg/kg

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat

VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Mild skin irritation.

Eye Contact: Causes serious eye irritation. Highly irritating.

Inhalation Irritating to respiratory system. Symptoms may including coughing.

Ingestion Causes gastrointestinal (digestive) tract irritation with nausea, vomiting, and diarrhea. May affect behavior/central nervous system (convulsions, somnolence), and respiration. May affect behavior/central nervous system (ataxia). May affect behavior/central nervous system (tremor, convulsions). May affect respiration (respiratory depression). May affect the cardiovascular system (change in heart rate). May affect the cardiovascular system (hypotension). May cause metabolic acidosis. May cause hypocalcemia. May cause lactic acidosis. May cause hyperkalemia.

Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Frequent intake of citrated beverages may cause erosion of dental enamel and irritation of the mucous membrane lining of the mouth (oral mucosa).

Sensitization: No information available.

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic.

| Components | CAS-No. | IARC | ACGIH - Carcinogens | NTP | OSHA HCS - Carcinogens | Australia - Notifiable Carcinogenic Substances | Australia - Prohibited Carcinogenic Substances |
|------------------------|---------|------------|---------------------|------------|------------------------|--|--|
| Citric Acid, Anhydrous | 77-92-9 | Not listed | Not listed | Not listed | Not listed | Not listed | Not listed |

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

Reproductive toxicity No data is available
Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure Respiratory system.
STOT - repeated exposure No information available.
Target Organs: Respiratory system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.
Citric Acid, Anhydrous - 77-92-9
Freshwater Fish Species Data: 1516 mg/L LC50 *Lepomis macrochirus* 96 h static 1
Water Flea Data: 120 mg/L EC50 *Daphnia magna* 72 h
Persistence and degradability: No information available
Bioaccumulative potential: No information available.
Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
 Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
 Empty containers should be taken for local recycling, recovery or waste disposal

| Components | CAS-No. | RCRA - F Series Wastes | RCRA - K Series Wastes | RCRA - P Series Wastes | RCRA - U Series Wastes |
|------------------------|---------|------------------------|------------------------|------------------------|------------------------|
| Citric Acid, Anhydrous | 77-92-9 | None | None | None | None |

14. TRANSPORT INFORMATION

DOT
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Class No information available
Packing group: No information available
Emergency Response Guide Number No information available
Marine Pollutant No data available

DOT RQ (lbs): No information available
Special Provisions No Information available
Symbol(s): No information available
Description: No information available

TDG (Canada)
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant No Information available
Description: No information available

ADR
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available

IMO / IMDG
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant No information available

RID
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available

ICAO
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available

IATA
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
ERG Code: No information available
Special Provisions No information available

| |
|-----------------------------------|
| 15. REGULATORY INFORMATION |
|-----------------------------------|

International Inventories

| Components | CAS-No. | U.S. TSCA | KOREA KECL | Philippines | Japan ENCS | CHINA | Australia | EINECS-No. |
|------------|---------|-----------|------------|-------------|------------|-------|-----------|------------|
|------------|---------|-----------|------------|-------------|------------|-------|-----------|------------|

| | | | | | | | | |
|------------------------|---------|---------|---------|----------|----------|---------|---------|-----------|
| | | | | (PICCS) | | | (AICS) | |
| Citric Acid, Anhydrous | 77-92-9 | Present | ACTIV E | Present | Present | Present | Present | Present |
| | | | | KE-20831 | (2)-1318 | 25349 | | 201-069-1 |

U.S. Regulations

Citric Acid, Anhydrous

FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 184.1033

FDA - 21 CFR - Total Food Additives 131.111, 131.112, 133.123, 133.124, 133.129, 133.169, 133.173, 133.178, 133.179, 145.134, 145.145, 146.187, 150.141, 150.161, 155.130, 161.190, 163.11, 163.110, 163.112, 169.115, 169.140, 169.150, 172.755, 172.861, 173.160, 173.165, 173.280, 178.1010, 184.1033, 73.85

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

| Components | CAS-No. | Carcinogen | Developmental Toxicity | Male Reproductive Toxicity | Female Reproductive Toxicity: |
|------------------------|---------|------------|------------------------|----------------------------|-------------------------------|
| Citric Acid, Anhydrous | 77-92-9 | Not Listed | Not Listed | Not Listed | Not Listed |

CERCLA/SARA

| Components | CAS-No. | CERCLA - Hazardous Substances and their Reportable Quantities | Section 302 Extremely Hazardous Substances and TPQs | Section 302 Extremely Hazardous Substances and RQs | Section 313 - Chemical Category | Section 313 - Reporting de minimis |
|------------------------|---------|---|---|--|---------------------------------|------------------------------------|
| Citric Acid, Anhydrous | 77-92-9 | None | None | None | None | None |

U.S. TSCA

| Components | CAS-No. | TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS) | TSCA 8(d) -Health and Safety Reporting |
|------------------------|---------|---|--|
| Citric Acid, Anhydrous | 77-92-9 | Not Applicable | Not Applicable |

Canada

WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component
Citric Acid, Anhydrous
77-92-9 (100)

WHMIS 2015 Hazard Classification
Serious Eye Damage/Eye Irritation - Category 2: H319 Causes serious eye irritation.; Combustible Dust - Category 1: May form combustible dust concentrations in air (factors such as combustibility and explosiveness of dusts including composition and shape and size of particles could cause substance to belong to 'Combustible dust' hazard class)

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

WHMIS 1988 Hazard Class

E Corrosive material

Components
Citric Acid, Anhydrous

WHMIS 1988
E including 40%

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

| Components | WHMIS Ingredient Disclosure List - |
|------------------------|------------------------------------|
| Citric Acid, Anhydrous | 1 % |

Inventory

| Components | CAS-No. | Canada (DSL) | Canada (NDSL) |
|------------------------|---------|--------------|---------------|
| Citric Acid, Anhydrous | 77-92-9 | Present | Not Listed |

| Components | CAS-No. | CEPA Schedule I - Toxic Substances |
|------------------------|---------|---|
| Citric Acid, Anhydrous | 77-92-9 | Not listed |
| Components | CAS-No. | CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting |
| Citric Acid, Anhydrous | 77-92-9 | Not listed |

EU Classification

EU GHS - SV - CLP 1272/2008

| Components | CAS-No. | EU GHS - SV - CLP (1272/2008) |
|------------------------|---------|-------------------------------|
| Citric Acid, Anhydrous | 77-92-9 | No information |

EU - CLP (1272/2008)

R-phrase(s)

R36 - Irritating to eyes.
R37 - Irritating to respiratory system.
R38 - Irritating to skin.

S -phrase(s)

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37 - Wear suitable gloves.
S39 - Wear eye/face protection.

| Components | CAS-No. | Classification | Concentration Limits: | Safety Phrases |
|------------------------|---------|----------------|-----------------------|----------------|
| Citric Acid, Anhydrous | 77-92-9 | | No information | |

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xi - Irritant.

16. OTHER INFORMATION

Revision Date: -

Prepared by: -

SDS US Dawn-n-shine

Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and dawnnshine assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his application.