Citric Acid

Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / March 26, 2012 / Rules and Regulation

Revision Date: 23-Jun-2025
Supersedes: 05-Mar-2022

1 PRODUCT & COMPANY IDENTIFICATION

Product Name: Citric Acid
Synonyms: 2-hydroxypropane-1,2,3-tricarboxylic acid
INCI Name: Citric Acid
CAS Number: 77-92-9
Formula: C6-H8-O7
Product Form: Solid
Product Use: Cosmetic use

Distributor: MakingCosmetics Inc.
Address: 10800 231st Way NE
Redmond, WA 98053 (USA)
Phone / Fax: 425-292-9502 / 425-292-9601
Web: **www.makingcosmetics.com**

Emergency Telephone Number: 1-800-424-9300 (Chemtrec)

2 HAZARDS IDENTIFICATION

GHS Classification: Eye irritation: Category 2A
Specific target organ toxicity: Category 3 (Respiratory system)

GHS Signal Word: **WARNING!**

GHS Hazard Pictograms:

GHS Hazard Statements: H319: Causes serious eye irritation.
H335: May cause respiratory irritation.

Hazards Not Otherwise Classified: May form combustible dust concentrations in air (during processing).

GHS Precautionary Statements: (Prevention) P280 Wear protective gloves/ protective clothing/eye protection/face protection.
P261: Avoid breathing dust.
(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.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312: Call a POISON CENTER/ doctor if you feel unwell.

GHS Potential Health Hazards: Eyes: Causes serious eye irritation.
Inhalation: May be an irritant.
Skin: May be an irritant.
Ingestion: May cause nausea, vomiting, and diarrhea.

NFPA Ratings (704):

Health	N/A	N/A
Flammability	N/A	N/A
Reactivity	N/A	N/A
Specific Hazard	N/A	

3 COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Weight %	Molecular Weight
Citric Acid	77-92-9	100%	Not Available

4 FIRST AID MEASURES

Eyes: Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

Inhalation: If breathed in, move person into fresh air. If symptoms persist, call a physician. If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.

Skin: In case of contact, immediately flush skin with plenty of water. Get medical attention if symptoms occur.

Ingestion: Do Not Induce Vomiting. Never give anything by mouth to an unconscious person. Keep respiratory tract clear. Do not give milk or alcoholic beverages. If symptoms persist, call a physician.

5 FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media: May be combustible at high temperatures. Use appropriate media (water spray, dry powder, foam, carbon dioxide (CO2)) for surrounding environment and adjacent fire. Do not use high volume water jet.

Special protective equipment & precautions for firefighters: Wear self-contained breathing apparatus and full protective clothing, including eye protection and boots. Follow standard procedure for chemical fires.

Flash Points: Not applicable.

Specific hazards arising from the chemical: Hazardous combustion products include Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). Exposure to decomposition products may be a hazard to health. See also Stability and reactivity section.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment & emergency procedures: Avoid dust formation. Avoid breathing dust. Avoid contact with skin and eyes. Do not try to clean up the leak without proper protective equipment. See section 8 for recommendations on the use of personal protective equipment.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Avoid liquid release into sewers/public water/environment. Notify environmental authorities in case of leak.

Methods and material for containment and cleaning up: Neutralize with chalk, alkali solution or ammonia. Keep in suitable, closed containers for disposal. Dispose of absorbed material in accordance with the regulations.

7 HANDLING & STORAGE

Precautions for safe handling: Avoid formation of respirable particles. Do not breathe vapors/dust. Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the application area. Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national regulations. Use good personal hygiene practice. See section 8 for recommendations on the use of personal protective equipment.

Conditions for safe storage, incl. any incompatibilities: Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards. No decomposition if stored and applied as directed. Store away from incompatible materials (see section 10 for incompatibilities).

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Component	Exposure Limits	Basis	Entity
Citric Acid	Not available		

TWA: Time Weighted Average over 8 hours of work.
TLV: Threshold Limit Value over 8 hours of work.
REL: Recommended Exposure Limit
PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.
IDLH: Immediately Dangerous to Life or Health
WEEL: Workplace Environmental Exposure Levels
CEIL: Ceiling

Personal Protection:

Eyes: Wear tightly fitting safety goggles and/or face-shield for abnormal processing problems.

Inhalation: No personal respiratory protective equipment normally required. In the case of dust or aerosol formation use respirator with an approved filter.

Body: Wear suitable gloves. The suitability for a specific workplace should be discussed with the producers of the protective gloves. Wear dust impervious protective clothing.

Other: Use good personal hygiene practices. Provide adequate ventilation. Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Crystalline
Odor: Odorless
Vapor Pressure at 25°C: 0.0002 hPa
Relative Vapor Density: Not applicable

Odor Threshold:	Not relevant	**Evaporation Rate:**	No data available
Color:	White	**Flammability:**	Does not ignite
Molecular Weight:	192.12 g/mol	**Upper/lower Explosive Limit:**	No data available
pH at 25°C:	1.8 (Concentration: 5%)	**Flash Point:**	Not applicable
Boiling Point:	Decomposes below boiling point.	**Specific Gravity:**	No data available
Melting/Freezing Point:	ca. 153°C	**Water Solubility at 20°C:**	ca. 1,450 g/l
Relative Density:	No data available	**Auto-Ignition Temperature:**	Not applicable
Partition Coefficient: n-octanol/water:	-1.8 - -0.2	**Decomposition Temperature:**	Not applicable
Viscosity:	Not applicable	**Explosive Properties:**	Not explosive
Oxidizing Properties:	No oxidizing effect.	**Surface Tension:**	Not determined.
Dust Explosion Class:	St1		

10 STABILITY AND REACTIVITY

Reactivity:	No decomposition if stored and applied as directed.
Chemical Stability:	No decomposition if stored and applied as directed.
Hazardous Polymerization:	No data available.
Conditions to Avoid:	Avoid dust formation.
Incompatible Materials:	Strong bases and oxidizing agents.
Hazardous Decomposition Products:	Build-up of dangerous/toxic fumes possible in cases of fire/high temperature. Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).
Possible Hazardous Reactions:	No decomposition if stored and applied as directed. Dust may form explosive mixture in air.

11 TOXICOLOGICAL INFORMATION

Acute Toxicity:	Not classified based on available information.
Skin:	(Rat, Dermal) LD50: > 2,000 mg/kg; Assessment: The substance or mixture has no acute dermal Toxicity.
Eyes:	(Rabbit) Method: OECD Test Guideline 405; Result: Causes serious eye irritation.
Inhalation:	(Guinea pig): ca. 75 mg/l; Exposure time: 3 min; Test atmosphere: dust/mist; Target Organs: Respiratory Tract; Symptoms: Cough.
Ingestion:	(Mouse, Oral) LD50: 5,400 mg/kg; Method: OECD Test Guideline 401; Assessment: The substance or mixture has no acute oral toxicity.
Carcinogenicity:	Not classified based on available information.
Teratogenicity:	No data available.
Germ Cell Mutagenicity:	Not classified based on available information. Test Type: reverse mutation assay; Test system: Salmonella typhimurium; Concentration: 0 - 5000 µg/plate; Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay); Result: negative; Test Type: Micronucleus test; Test system: Human lymphocytes; Concentration: 50, 100, 200, 3000 µg/ml; Method: Mutagenicity (in vitro mammalian cytogenetic test); Result: positive. (Rat, Oral) Test Type: Chromosomal aberration; Cell type: Bone marrow; Dose: 0,3 mg/kg bw; Method: OECD Test Guideline 475; Result: negative.
STOT Single Exposure:	The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.
STOT Repeated Exposure:	Not classified based on available information.
Repeated Dose Toxicity:	(Rat, Oral) NOAEL: 4,000 mg/kg. LOAEL: 8,000 mg/kg; Exposure time: 10 days; Dose: 2, 4, 8, 16 g/kg bw/day.
Reproductive Toxicity:	Not classified based on available information.
Respiratory Sensitization:	Not classified based on available information.
Skin Sensitization:	Not classified based on available information.
Skin Corrosion/Irritation:	(Rabbit) OECD Test Guideline 401; No skin irritation. Not classified based on available information.
Aspiration Toxicity:	Not classified based on available information.

12 ECOLOGICAL INFORMATION

Ecotoxicity:	No data available.

Aquatic Vertebrate:	(Leuciscus idus (Golden orfe)) LC50: 440 mg/l; Exposure time: 48 hours; Test Type: static test; Method: OECD Test Guideline 203.
Aquatic Invertebrate:	(Daphnia magna (Water flea)) LC50: 1,535 mg/l; Exposure time: 24 hours; Test Type: static test; Method: OECD Test Guideline 202.
Algae/Aquatic Plants:	(Scenedesmus quadricauda (Green algae)) NOEC: 425 mg/l; Exposure time: 8 days; Test Type: static test.
Mirco-Organisms:	(Pseudomonas putida) TT: > 10,000 mg/l; Exposure time: 16 hours.
Persistence and Degradability:	Biodegradation: 97%; Exposure time: 28 days; Method: OECD Test Guideline 301B; Remarks: Readily biodegradable; Biodegradation: 100%; Exposure time: 19 days; Method: OECD Test Guideline 301E; Remarks: Readily biodegradable.
Bioaccumulative Potential:	Remarks: The product is miscible in water and readily biodegradable in both water and soil. Accumulation is not expected.
Mobility in Soil:	Stability in soil remarks: Readily biodegradable.
PBT and vPvB Assessment:	No data available.
Other Adverse Effects:	No data available.

13 DISPOSAL CONSIDERATIONS

Waste Residues:	Do not dispose of waste into sewer. Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies, if necessary, before disposing of waste product.
Product Containers:	Do not contaminate ponds, waterways or ditches with chemical or used container. Do not re-use empty containers. Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies, if necessary, before disposing of waste product container.

The information in section 13 is for the product as shipped. Use and/or alterations to the product may change the characteristics of the material and alter the waste classification and proper disposal methods

14 TRANSPORT INFORMATION

DOT (Dept. of Transportation, USA):	Not regulated as a dangerous good.
TDG (Transportation of Dangerous Goods, Canada):	Not regulated as a dangerous good.
IMDG (International Maritime Dangerous Goods):	Not regulated as a dangerous good.
IATA (International Air Transport Association):	Not regulated as a dangerous good.
ICAO (International Civil Aviation Organization):	No data available.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:	Not applicable for product as supplied.

15 REGULATORY INFORMATION

TSCA Inventory Status:	All substances listed as active on the TSCA inventory.
REACH:	This substance has been registered according to Regulation (EC) No. 1907/2006 (REACH).
Canada (DSL):	All components of this product are on the Canadian DSL.
Canada (NPRI):	No component is listed on NPRI. No substances are subject to a Significant New Activity Notification.
China (IECSC):	On the inventory, or in compliance with the inventory.
Australia (AIIC):	On the inventory, or in compliance with the inventory.
Japan (ISHL/ENCS):	On the inventory, or in compliance with the inventory.
Philippines (PICCS):	On the inventory, or in compliance with the inventory.
Korea (KECI):	On the inventory, or in compliance with the inventory.
Thailand (TCSI):	On the inventory, or in compliance with the inventory.
New Zealand (NZIoC):	On the inventory, or in compliance with the inventory.

16 OTHER INFORMATION

Revision Date:	23-Jun-2025
Compliance:	This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

Disclaimer: This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. Such information is to be the best of the company's knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee of any kind, express or implied, is made as to its accuracy, reliability or completeness and we assume no responsibility for any loss, damage or expense, direct or consequential, arising out of use. It is the user's responsibility to satisfy himself as to the suitableness & completeness of such information for his own particular use.