



Safety Data Sheet

Section 01 Identification

Product Identifier	Citric Acid Citric Acid Anhydrous (30-80 Mesh) Citric Acid Anhydrous, Granular
Other Means of Identification	2-hydroxyl-1,2,3-propanyl-tri-carboxylic acid
Product Use and Restrictions on Use	Used as an acidulant or a sequestrant in food and pharmaceutical industries; also used in detergents, concrete admixtures and plasticizers; pH modification
Initial Supplier Identifier	Voyageur Soap & Candle Co. LTD Unit 14 - 19257 Enterprise Way Surrey BC V3S 6J8 Phone: 1 (800) 758-7773 www.voyageursoapandcandle.com
24-Hour Emergency Phone	1(800) 424-9300 CHEMTREC

Section 02 Hazard Identification

Physical Hazards

Combustible dusts Category 1

Health Hazards

Serious eye damage / eye irritation Category 2

Signal Word

Warning

Hazard Statements

May form combustible dust concentrations in air.
H319 Causes serious eye irritation.

Pictograms



Precautionary Statements

Prevention

Safety Data Sheet

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280 Wear 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. If eye irritation persists: Get medical advice or attention.

Hazards Not Otherwise Classified

Not available

Supplemental Information

Not available

Section 03 Composition / Information on Ingredients

Hazardous Ingredients:

Chemical name	Common name(s)	CAS number	Concentration (w/w%)
2-hydroxypropane-1,2,3-tricarboxylic acid	Citric acid	77-92-9	>99.5%

Section 04 First-Aid Measures

Description of necessary first-aid measures

Inhalation Get medical advice / attention if you feel unwell or are concerned.

Ingestion Get medical advice / attention if you feel unwell or are concerned.

Skin contact Rinse skin with lukewarm, gently flowing water / shower for 5 minutes or until product is removed. If skin irritation occurs or if you feel unwell: Get medical advice / attention.

Eye contact Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for 15 to 20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice / attention.

Most important symptoms and effects, both acute and delayed

Inhalation May cause respiratory irritation.

Ingestion May cause discomfort or nausea.

Skin contact Not irritating to skin.

Eye contact Causes serious eye irritation.

Further information For further information see Section 11 Toxicological Information.

Section 05 Fire Fighting Measures

Suitable extinguishing media Extinguish fire using extinguishing agents suitable for the surrounding fire.

Unsuitable extinguishing media Not available

Specific hazards arising from the chemical Finely powdered citric acid anhydrous may form flammable or explosive mixtures with air at 500 mg of citric acid per litre. Reacts with many metals to liberate hydrogen gas that can form explosive mixtures. In the event of a fire oxides of carbon may be released. Thermal decomposition occurs at 175 °C.

Safety Data Sheet

Special protective equipment for fire-fighters Wear NIOSH-approved self-contained breathing apparatus and protective clothing.

Section 06 Accidental Release Measures

Personal Precautions / Protective Equipment / Emergency Procedures Wear appropriate personal protective equipment (See Section 08 Exposure Controls and Personal Protection). Stay upwind, ventilate area. Only enter area with PPE.

Environmental Precautions Prevent material from entering waterways, sewers or confined spaces. Notify local health and wildlife officials. Notify operators of nearby water intakes.

Methods and Materials for Containment and Cleaning Up Dry sweeping is not recommended. Pre-dampening the material or use of a vacuum is preferred. Shovel into clean, dry, labeled containers and cover. Flush area with water.

Section 07 Handling and Storage

Precautions for Safe Handling Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure. Inspect containers for damage or leaks before handling. If the original label is damaged or missing replace with a workplace label. Have suitable emergency equipment for fires, spills and leaks readily available.

Conditions for Safe Storage Store in a cool, dry, well-ventilated area, out of direct sunlight, away from heat sources and incompatible materials. Always store in original labeled container. Keep containers tightly closed when not in use and when empty. Empty containers may contain hazardous residues. Protect label and keep it visible.

Incompatibilities Bases, such as potassium hydroxide, sodium hydroxide, calcium hydroxide (slaked lime), ammonia, carbonates.
Oxidizing agents, such as oxygen, hydrogen peroxide, sulphuric and nitric acids, hypochlorites and permanganates.
Reducing agents, such as hydrogen, sodium borohydride, sulphur dioxide, thiosulphates, hydrazine, phosphites, carbon, and oxalic, formic and ascorbic acid.
Metals, such as aluminum, copper, and zinc.

Section 08 Exposure Controls and Personal Protection

Exposure limits

There are no known exposure limits for this product.

Engineering controls

Ventilation Requirements Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions should be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems.

Other An eye wash bottle or eye wash station should be available, tested, and be in close proximity to the product being handled in accordance with provincial regulations.

Protective equipment

The following are recommendations only. It is the responsibility of the employer / user to conduct a hazard assessment of the process in which this product being used and determine the proper engineering controls and PPE for their process. Additional regulatory and safety information should be sought from local authorities and, if needed, a professional industrial hygienist.

Safety Data Sheet

Eye and face protection	Where there is potential eye or face exposure, tightly fitting chemical goggles are recommended. Contact lenses are not recommended; they may contribute to severe eye injury.
Hand and body protection	Where handling this product it is recommended that skin contact is avoided.
Respiratory protection	In case of insufficient ventilation wear suitable respiratory equipment.
Thermal hazards	Not available

Section 09 Physical and Chemical Properties

Appearance

Physical state	Solid crystals or granules
Colour	White
Odour	Odourless
Odour threshold	Not applicable

Property

pH	2.2 @ 1%
Melting point / freezing point	153 °C
Initial boiling point and boiling range	Decomposes
Flash point	Not applicable
Evaporation rate	Not available
Flammability	Finely powdered citric acid anhydrous may form flammable or explosive mixtures with air at 500 mg of citric acid per litre.
Upper flammable limit	Not available
Lower flammable limit	Not available
Vapour pressure	2.21×10^{-6} Pa
Vapour density	Not available
Relative density	1.54-1.665 g/cm ³
Solubility	590 g/L @ 20 °C in water
Partition coefficient: n-octanol/water	Log Kow: -0.2 to -1.8
Auto-ignition temperature	1010 °C
Decomposition temperature	175 °C
Viscosity	Not applicable
Specific gravity	Not applicable

Safety Data Sheet

Formula	C ₆ H ₈ O ₇
Molecular weight	192.027 g/mol

Section 10 Stability and Reactivity

Reactivity	Reacts with many metals to liberate hydrogen gas that can form explosive mixtures. Reacts violently with bases.
Stability	This product is stable if stored according to the recommendations in Section 07.
Possibility of hazardous reactions	Hazardous polymerization will not occur.
Conditions to avoid	Avoid contact with incompatible materials. Do not heat.
Incompatible materials	Bases, such as potassium hydroxide, sodium hydroxide, calcium hydroxide (slaked lime), ammonia, carbonates. Oxidizing agents, such as oxygen, hydrogen peroxide, sulphuric and nitric acids, hypochlorites and permanganates. Reducing agents, such as hydrogen, sodium borohydride, sulphur dioxide, thiosulphates, hydrazine, phosphites, carbon, and oxalic, formic and ascorbic acid. Metals, such as aluminum, copper, and zinc.
Hazardous decomposition products	Thermal decomposition may produce oxides of carbon. Thermal decomposition occurs at 175 °C.

Section 11 Toxicological Information

Acute Toxicity (LD50 values)

Component	Route	Species	Value	Exposure time
citric acid	Oral	mouse	5400 mg/kg	
	Dermal	rat	>2000 mg/kg	24 hours

Toxic Health Effect Summary

Chemical characteristics	Citric acid is a metabolic intermediate vital to the TCA respiration pathway found in all animal and plant cells. There is little evidence that citric acid and the citrate salts have deleterious effects, even in large doses. Indeed there is some support for the fact that citric acid in the human diet is favourable by inhibiting the formation of calcium oxalate kidney and bladder stones. This statement is applicable to the citrate salts since once absorbed citrate salts will dissociate into citric acid and their counter-ion.
Skin	Not irritating to skin.
Ingestion	May cause discomfort or nausea.
Inhalation	May cause respiratory irritation.
Eye contact	Causes serious eye irritation.
Sensitization	This product and its components at their listed concentration have no known sensitizing effects.
Mutagenicity	This product and its components at their listed concentration have no known mutagenic effects.
Carcinogenicity	This product and its components at their listed concentration have no known carcinogenic effects.
Reproductive toxicity	This product and its components at their listed concentration have no known reproductive effects.

Safety Data Sheet

Specific organ toxicity	This product and its components at their listed concentration have no known effects on specific organs.
Aspiration hazard	Not available
Synergistic materials	Not available

Section 12 Ecological Information

Ecotoxicity

Component	Type	Species	Value	Exposure Time
Citric acid	LC50	Leuciscus idus melanotus	440 mg/L	48 hours
	EC50	Daphnia magna	1,535 mg/L	24 hours

Biodegradability	The domestic substance list categorizes citric acid as non-persistent.
Bioaccumulation	The domestic substance list categorizes citric acid as non-bioaccumulative.
Mobility	This product is water soluble, and will not adsorb to soil and may contaminate ground water.
Other adverse effects	Not available

Section 13 Disposal Considerations

Waste From Residues / Unused Products	Dispose in accordance with all federal, provincial, and local regulations including the Canadian Environmental Protection Act.
Contaminated Packaging	Do not remove label, follow label warnings even after the container is empty. Empty containers should be recycled or disposed of at an approved waste handling facility.

Section 14 Transport Information

UN number	Not available
UN proper shipping name and description	Not available
Transport hazard class(es)	Not available
Packing group	Not available
Excepted quantities	Not available
Environmental hazards	Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.
Special precautions	No special provisions
Transport in bulk	ERAP index: not available MARPOL 73/78 and IBC Code: This product is not listed in Chapter 17 of the IBC Code.
Additional information	Secure containers (full or empty) during shipment and ensure all caps, valves, or closures are secured in the closed position.

Safety Data Sheet

TDG PRODUCT CLASSIFICATION: This product has been classified on the preparation date specified at section 16 of this SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and published test data regarding the classification of this product are listed in the references at section 16 of this SDS.

Section 15 Regulatory Information.

NOTE: THE PRODUCT LISTED ON THIS SAFETY DATA SHEET HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN HAZARDOUS PRODUCTS REGULATIONS. THIS SAFETY DATA SHEET CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.

All components of this product appear on the domestic substance list.

Section 16 Other Information

Date of latest revision: July 03, 2019

Disclaimer

The information provided in this Material Safety Data Sheet is based on current available data and knowledge and is believed to be accurate and given in good faith. Voyageur Soap & Candle Co. LTD and its subsidiaries however assume no liability and make no warranty, either expressed or implied, pertaining to the accuracy and completeness of the information contained herein including in regards to fitness and merchantability. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and therefore should not be construed as guaranteeing any specific property. The information herein relates only to the specific designated material and may not be valid for such material used in combination with any other materials, or in any process not specified in the text. Users should therefore consider this data only as a supplement to other information available from all other sources, and should incorporate this information into programs for the proper use and disposal of their materials and the health and safety of employees and customers.

References:

- 1) CHEMINFO
- 2) TOXNET
- 3) eChemPortal
- 4) ECHA
- 5) Transportation of Dangerous Goods Canada
- 6) HSDB
- 7) PAN