

Citric Acid SDS, Safety Data Sheet
MSDS Sheet, Material Safety Data Sheet

Section 1 - Chemical Product and Company Identification

MSDS Name: Citric Acid, Anhydrous

Synonyms: 2-Hydroxy-1,2,3-propanetricarboxylic acid

Recommended uses and uses advised against (if any): Oil well fracturing and Industrial use.

SUPPLIER

Company: Finoric LLC

Address: 8115 Loop 540, Beasley, Texas, 77417 USA

In case of emergency contact:

InfoTrac

US: 1-800-535-5053

International: 352-323-3500

Section 2 - Hazards Identification

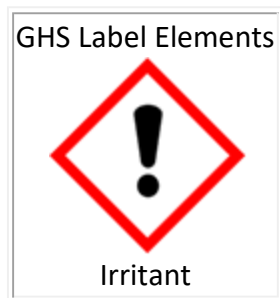
**GHS, Globally Harmonized System Classification in accordance with 29 CFR 1910
Classification according to Regulation (EC) No 1272/2008**

Acute toxicity, Dermal (Category 5)

Skin irritation (Category 3)

Eye irritation (Category 2A)

Labeling according GHS USA & Regulation (EC) No 1272/2008



Signal Words: Warning

Hazard statements:

H313: May be harmful in contact with skin.



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H316: Causes mild skin irritation

H319: Causes serious eye irritation

Precautionary statements:

P262: Do not get in eyes, on skin, or on clothing.

P264: Wash skin thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P270: Do not eat, drink or smoke when using this product.

P273: Avoid release to the environment.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P332+313: If skin irritation occurs: Get medical advice/attention.

P302+ P352 - IF ON SKIN: Wash with plenty of soap and water.

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.

Classification according to EU Directives 67/548/EEC or 1999/45/EC:

Hazard Symbol:

Xi

Risk Phrase:

R36/37/38 Irritating to eyes, respiratory system and skin.

Section 3 - Composition, Information on Ingredients

Chemical Name: Citric acid

CAS#: 77-92-9

EINECS EC Number: 201-069-1

Percent: 99.0

Section 4 - First Aid Measures

Always seek medical attention after first aid measures are provided.

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid. Do NOT allow victim to rub or keep eyes closed.

Skin: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Remove from exposure to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using



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oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam. Use agent most appropriate to extinguish fire. Do NOT get water inside containers.

Section 6 - Accidental Release Measures

Personal precautions, protective equipment, environmental precautions and emergency procedures: Avoid breathing dust/fumes/gas/mist/vapors/spray. Use individual protective equipment (waterproof boots, suitable protective clothing, safety glasses, etc). Restrict unprotected personnel from the area. Prevent any contact with hot surfaces. Do not approach facing the wind. Do not touch the spilled material. Keep away from drains, surface and groundwater and soil.

Methods and materials used for containment Cleanup procedures and Storage: Contain spilled material. Cover with an inert, non-combustible, inorganic absorbent material, sweep up, and remove to an approved disposal container. Very fine particles of Citric acid can cause a fire or explosion. Eliminate all ignition sources. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Remove all sources of ignition. Provide ventilation. Spill of Citric acid may be neutralized with lime. Do not get water inside containers.

Section 7 - Handling and Storage

Precautions for safe handling: Apply according to good manufacturing and industrial hygiene practices with proper ventilation. Wash thoroughly after handling. Do not drink, eat or smoke while handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid breathing dust/fumes/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use individual protective equipment (waterproof boots, suitable protective clothing, safety glasses, etc). Prevent any contact with hot surfaces. Containers of this material may be hazardous when empty since they retain product residues.

Conditions for safe storage, including any incompatibilities: Store in cool, dry and ventilated area away from heat sources and protected from sunlight in tightly closed original container. Keep air contact to a minimum. Store protected from heat, sparks and ignition sources and incompatible materials. Store Citric acid protected from moisture. Avoid contact with skin and eyes. Avoid inhalation of dust/mist/vapor. Do not store with incompatible materials like oxidizing agents, sulfides (inorganic, e.g. ferric sulfide, lead sulfide, sodium sulfide), metal nitrates, alkali carbonates, alkalis, potassium tartrate, acetates, bicarbonates..

Section 8 - Exposure Controls, Personal Protection



Airborne Exposure Limits: None established.

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved): For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerin, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area of Citric acid.

Section 9 - Physical and Chemical Properties

Appearance: Citric acid is white granules.

Odor: Citric acid is odorless.

Odor threshold: Not available.

pH: 2.2 (0.1 N sol)

Relative density: 1.54

Melting Point: ca. 100C (ca. 212F)

Initial boiling point and boiling range: Not available.

Flash point: Not available.

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.

Upper/lower flammability or explosive limits: Not available.

Vapor pressure: Not available.

Vapor density: Not available.

Evaporation rate: Not available.

Flammability (solid, gas): Not available.

Partition coefficient: n-octanol/water: Not available.

Solubility: ca. 60 g/100 ml @ 20C (Anhydrous)

Viscosity: Not available.

Section 10 - Stability and Reactivity

Chemical Stability: Citric acid is stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, dust generation, moisture, exposure to moist air or water.



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Incompatibilities with Other Materials: Oxidizing agents, sulfides (inorganic, e.g. ferric sulfide, lead sulfide, sodium sulfide), metal nitrates, alkali carbonates, alkalis, potassium tartrate, acetates, bicarbonates.

Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

Oral rat LD50: 3 gm/kg; irritation skin rabbit: 500 mg/24H mild; eye rabbit: 750 µg/24H severe.

Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, ACGIH, OSHA and NTP.

Mutagenic Effects: Not available.

Teratogenic Effects: Not available.

Developmental Toxicity: Not available.

Reproductive Effects: No information available.

Section 12 - Ecological Information

Toxicity to fish: mortality LC50 - Leuciscus idus melanotus - 440 mg/l - 48 h

Toxicity to daphnia and other aquatic invertebrates: static test - Daphnia magna (Water flea) - 1.535 mg/l - 24 h

Results of PBT and vPvB assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 13 - Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container of unused contents in accordance with law.

Section 14 - Transport Information

UN Number: UN3265

DOT Description: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. 8, UN3265, II

Hazard Class: 8; Packing Group II

Container/Mode: 55 GAL RDUM/275 GAL TOTE/330 GAL TOTE/TRUCK PACKAGE

NOS Component: CITRIC ACID

RQ (Reportable Quantity) - 49 CFR 172.101 Not applicable

Section 15 - Regulatory Information

No significant information found.

Section 16 - Additional Information



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