## Section 1. Identification

**Product Identity** Citric Acid, Anhydrous
**Other means of identification** 2-Hydroxy-1,2,3-Propanetricarboxylic Acid

**Relevant identified uses of the substance or mixture and uses advised against**

Industrial and laboratory applications

**Details of the supplier of the safety data sheet**

**Company Name**
Silver Fern Chemical, Inc.
121 W. De La Guerra Street, Suite B
Santa Barbara, CA 93101 USA
info@silverfernchemical.com
Website - www.silverfernchemical.com

**24-hour Emergency Telephone No.**
**Emergency telephone number:**
**Infotrac: 1-800-535-5053**
**Outside USA & Canada +1-352-323-3500**

**Customer Service:** Customer Service: 1-866-282-3384

## Section 2. Hazard(s) identification

**Emergency Overview**
WARNING! MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR (DURING PROCESSING)
**Classification of the substance or mixture under OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7)**

| | |
|---|---|
| Skin corrosion/irritation category 2;H315 | Causes skin irritation. |
| Serious eye damage / eye irritation, category 2A;H319 | Causes serious eye irritation. |
| Specific target organ toxicity, Single exposure category 3;H335 | May cause respiratory irritation. |
| Combustible Dust | May form combustible dust concentrations in air. |

**Label elements**



**Warning**

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
May form combustible dust concentrations in air.

**[Prevention]**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No Smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof electrical, ventilating, light, equipment.

P261 Avoid breathing dust, fume, gas, mist, vapors, spray.
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves, eye protection, and face protection.
**[Response]**
P302+352 IF ON SKIN: Wash with plenty of soap and water.
P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER, doctor or physician if you feel unwell.
P332+313 If skin irritation occurs: Get medical attention.
P337+313 If eye irritation persists: Get medical advice or attention.
P362+364 Take off contaminated clothing and wash it before reuse.
P378 Use alcohol resistant foam, $CO_2$, powder, water spray for extinction. Do not use water jet.
**[Storage]**
P403+233 Store in a well ventilated place. Keep container tightly closed.
P405 Store locked up.
**[Disposal]**
P501 Dispose of contents or container in accordance with local and national regulations.

**Other hazards**

May form combustible dust concentrations in air.

This product contains no PBT/vPvB/vPvM chemicals.
This product contains no endocrine disrupting chemicals.

Does NOT contain component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS) per the US EPA PFASMASTER combined list of PFAS chemicals.

## Section 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the OSHA's Hazard Communication Standard (1910.1200) revised 2024

(GHS revision 7).

| Ingredient/Chemical Designations | Weight % | GHS Classification | Notes |
|---|---|---|---|
| Citric acid<br>CAS Number: 77-92-9<br>Synonyms: 2-HYDROXY 1, 2, 3 PROPANE TRICARBOXYLIC ACID | >99.5 | Serious eye damage / eye irritation, category 2;H319<br>Specific target organ toxicity, Single exposure category 3; H335Skin corrosion/ irritation category 2;H315 | No data available |

The actual concentration or concentration range is withheld as a trade secret.
*PBT/vPvB - PBT, vPvM or vPvB-substance.
The full texts of the phrases are shown in Section 16.

## Section 4. First aid measures

### Description of first aid measures

**General** In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

**Inhalation** Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

**Eyes** Rinse with plenty of clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

**Skin** Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

**Ingestion** If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

### Most important symptoms and effects, both acute and delayed

**Overview** No specific symptom data available.
No chronic toxicity or long term toxicity information available. Treat symptomatically. See section 2 for further details.

**Inhalation** May cause respiratory irritation.

**Eyes** Causes serious eye irritation.

**Skin** Causes skin irritation.

## Section 5. Fire-fighting measures

### Extinguishing media

Recommended extinguishing media; alcohol resistant foam, $CO_2$, powder, water spray.
Unsuitable extinguishing media: Do not use; water jet.

### Special hazards arising from the substance or mixture

Hazardous decomposition: When heated, emits highly toxic and corrosive fumes of hydrogen compounds and hydrogen gas.
**Explosion:**Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No Smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof electrical, ventilating, light, equipment.
Avoid breathing dust, fumes, gas, mist, vapors, spray.
Closed containers may rupture due to the buildup of pressure when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Obtain medical attention.

### Advice for fire-fighters

As with all fires, wear positive pressure, self-contained breathing apparatus, (SCBA) with a full face piece and protective clothing. Persons without respiratory protection should leave area. Wear SCBA during clean-up immediately after fire. No smoking. Dust explosions are possible.

**ERG Guide No.** ----

## Section 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

Put on appropriate personal protective equipment (see section 8).
Dust Deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. If possible, water contaminated by this material should be contained from being discharged to any waterway, sewer or drain to prevent environmental contamination.

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

Nonsparking tools should be used.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

**Environmental precautions**

**Explosion:**Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Do not allow spills to enter drains or waterways.

**Methods and material for containment and cleaning up**

Sweep or vacuum to clean up spills. Do not use any procedure which causes dispersion of dust into the air if any possibility of ignition exists. Dispose of in accordance with local, state and federal regulations.
Contain, dilute cautiously with water, and neutralize with soda ash or lime.

## Section 7. Handling and storage

**Precautions for safe handling**
Handle containers carefully to prevent damage and spillage.
Avoid dust generation when handling product to minimize dust explosion potential.
Do not get in eyes or on skin or clothing. Do not breathe dust. Do not rub eyes. No smoking. If normal use of material presents a respiratory hazard, use only adequate

ventilation or wear an appropriate respirator. Wash contaminated clothing and shoes thoroughly before reuse.

**Conditions for safe storage, including any incompatibilities**
Keep container tightly closed.
Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.
Incompatible materials: Metal, glass, stoneware, alkali and strong concentrated acids. Store in dry, well-ventilated areas away from incompatible materials (see Section 10), food and drink. Transfer only to approved containers having correct labeling. Hygroscopic material! Keep container tightly closed when not in use to prevent moisture absorption. Protect containers from physical damage. Containers that have been opened must be carefully resealed and kept upright to prevent spillage. Containers are hazardous when empty as they contain product residues. Use appropriate containment to avoid environmental contamination. Ventilate closed areas.

**Specific end use(s)**
No available information

## Section 8. Exposure controls / personal protection

**Control parameters**

**Exposure Limits**

| CAS No. | Ingredient | Source | Value |
|---|---|---|---|
| 77-92-9 | Citric acid | OSHA | No Established Limit |
| | | ACGIH | No Established Limit |
| | | NIOSH | No Established Limit |

The exposure limits for nuisance dust are: OSHA PEL: 15 mg/m$^3$(50 mppcf*) TWA, ACGIH 10 mg/m$^3$.

**Exposure controls**

| | |
|---|---|
| **Respiratory** | Use NIOSH/MSHA approved respirator, following manufacturer's recommendations when concentrations exceed permissible exposure limits. |
| **Eyes** | Wear safety glasses with side shields to protect the eyes. An eye wash station is suggested as a good workplace practice. |
| **Skin** | Chemical resistant clothing such as coveralls/apron and boots should be worn. Chemical impervious gloves required. |
| **Engineering Controls** | It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen- deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks. |
| **Other Work Practices** | Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse. |

See section 2 for further details.

## Section 9. Physical and chemical properties

### Information on basic physical and chemical properties

| | |
|---|---|
| **Physical State** | White crystalline powder. |
| **Color** | White |
| **Odor** | Odorless |
| **Odor threshold** | No available information |
| **Melting point / freezing point** | 98 - 153 °C (208 - 307 °F) |
| **Initial boiling point and boiling range** | Decomposition: Decomposes below the boiling point. |
| **Flammability (solid, gas)** | Not Applicable |

| | |
|---|---|
| **Upper/lower flammability or explosive limits** | Lower Explosive Limit: No available information<br>Upper Explosive Limit: No available information |
| **Flash Point** | No available information |
| **Auto-ignition temperature** | 1,010 °C |
| **Decomposition temperature** | Thermal decomposition : > 170 °C |
| **pH** | 1.75 (100 g/l) |
| **Kinematic viscosity** | No available information |
| **Solubility in Water** | 750 g/l @ 20 °C |
| **Partition coefficient n-octanol/water (Log Kow)** | log Pow = -1.72 |
| **Vapor pressure (Pa)** | No available information |
| **Relative Density** | 1.542 g/cc @ 20 °C |
| **Vapor Density** | No available information |
| **Evaporation rate (Ether = 1)** | < 1 [n-BuOAc = 1] |
| **Oxidising properties** | No available information |
| **Explosive properties** | No available information |

**Other information**
No other relevant information.

## Section 10. Stability and reactivity

**Reactivity**
Hazardous Polymerization will not occur.
**Chemical stability**
This material is stable under recommended conditions of storage and handling.
Hygroscopic material (absorbs moisture from the air).
**Possibility of hazardous reactions**
Hazardous polymerization will not occur.
**Conditions to avoid**
Excessive heat and open flame.
**Incompatible materials**
Metal, glass, stoneware, alkali and strong concentrated acids.
**Hazardous decomposition products**

When heated, emits highly toxic and corrosive fumes of hydrogen compounds and hydrogen gas.

## Section 11. Toxicological information

### Acute toxicity

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

| Ingredient | Oral LD50, mg/kg | Skin LD50, mg/kg | Inhalation Vapor LC50, mg/L/4hr | Inhalation Dust/Mist LC50, mg/L/4hr | Inhalation Gas LC50, ppm |
|---|---|---|---|---|---|
| Citric acid - (77-92-9) | No data available. | > 2,000.00, Rat - Category: NA | No data available. | No data available. | No data available. |

### Carcinogen Data

| CAS No. | Ingredient | Source | Value |
|---|---|---|---|
| 77-92-9 | Citric acid | OSHA | Regulated Carcinogen: No; |
| | | NTP | Known: No; Suspected: No; |
| | | IARC | No |
| | | ACGIH | No Established Limit |

| Classification | Category | Hazard Description |
|---|---|---|
| Acute toxicity (oral) | --- | Not Applicable |
| Acute toxicity (dermal) | --- | Not Applicable |
| Acute toxicity (inhalation) | --- | Not Applicable |
| Skin corrosion/irritation | 2 | Causes skin irritation. |
| Serious eye damage/irritation | 2A | Causes serious eye irritation. |
| Respiratory sensitization | --- | Not Applicable |
| Skin sensitization | --- | Not Applicable |
| Germ cell mutagenicity | --- | Not Applicable |
| Carcinogenicity | --- | Not Applicable |
| Reproductive toxicity | --- | Not Applicable |
| STOT-single exposure | --- | Not Applicable |
| STOT-single exposure (3) | 3 | May cause respiratory irritation. |

| | | |
|---|---|---|
| STOT-repeated exposure | --- | Not Applicable |
| Aspiration hazard | --- | Not Applicable |

**Possible routes of entry:**
Inhalation, ingestion, skin contact, and skin absorption.
**Symptoms and effects, both acute and delayed:**
No specific symptom data available.
No chronic toxicity or long term toxicity information available. Treat symptomatically.

**Inhalation** May cause respiratory irritation.
**Eyes** Causes serious eye irritation.
**Skin** Causes skin irritation.

## Section 12. Ecological information

**Toxicity**
No additional information provided for this product. See Section 3 for chemical specific data.
**Aquatic Ecotoxicity**

| Ingredient | 96 hr LC50 fish, mg/L | 48 hr EC50 crustacea, mg/L | ErC50 algae, mg/L |
|---|---|---|---|
| Citric acid - (77-92-9) | 600.00, Leuciscus idus | 2,083.00, Daphnia magna | No data available. |

**Persistence and degradability**
There is no data available on the preparation itself.
**Bioaccumulative potential**
No available information
**Mobility in soil**
No available information
**Results of PBT and vPvB assessment**
This product contains no PBT/vPvB/vPvM chemicals.
**Other adverse effects**
No available information

## Section 13. Disposal considerations

**Waste treatment methods**
Observe all federal, provincial and local regulations when disposing of this substance.

## Section 14. Transport information

| | US DOT (Domestic Surface Transportation) | IMO / IMDG (Ocean Transportation) | ICAO/IATA |
|---|---|---|---|
| **UN number** | Not Regulated | Not Regulated | Not Regulated |
| **UN proper shipping name** | Not Regulated | Not Regulated | Not Regulated |
| **Transport hazard class(es)** | Class: Not Applicable<br>Sub Class: Not Applicable | Class: Not Applicable<br>Sub Class: Not Applicable | Class: Not Applicable<br>Sub Class: Not Applicable |
| **Packing group** | Not Applicable | Not Applicable | Not Applicable |

**Environmental hazards**

IMDG Marine Pollutant: No;
**Special precautions for user**

No available information

## Section 15. Regulatory information

**Regulatory Overview** The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Classification of the substance or mixture under OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7)

## Toxic Substance Control Act (TSCA)

| CAS Number | Ingredient | Toxic Substance Control Act (TSCA) | Comments | Status |
|---|---|---|---|---|
| 0000077-92-9 | Citric acid | Yes | | ACTIVE |

The following flags are used:
•Active - indicates commercial status designation of active
•E - indicates a substance that is the subject of a Section 5(e) Consent Order under TSCA.
•F - indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
•N - indicates a polymeric substance containing no free-radical initiator in its Inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
•P - indicates a commenced Premanufacture Notice (PMN) substance.
•R - indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
•S - indicates a substance that is identified in a final Significant New Uses Rule.
•SP - indicates a substance that is identified in a proposed Significant New Uses Rule.
•T - indicates a substance that is the subject of a final Section 4 test rule under TSCA.
•UVCB Chemical Substances of Unknown or Variable Composition, Complex Reaction Products and Biological Materials •XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
•Y1 - indicates a polymer that has a number-average molecular weight greater than 1,000 and that was exempt under the 1984 polymer exemption rule.
•Y2 - indicates a polymer that is a polyester and that was exempt under the 1984 polymer exemption rule.

### EPCRA 302 Extremely Hazardous:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

### EPCRA 313 Toxic Chemicals:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

### Proposition 65 - Carcinogens (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

### Proposition 65 - Developmental Toxins (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

### Proposition 65 - Female Repro Toxins (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

### Proposition 65 - Male Repro Toxins (>0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting

under this statute.

**Proposition 65 Label Warning:**
This product contains no chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

**New Jersey RTK Substances (>1%) :**
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**Pennsylvania RTK Substances (>1%) :**
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**OSHA Process Safety Management Standard Highly Hazardous Chemicals, Toxics and Reactives:**
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**US EPA List of Regulated Substances under the Risk Management Plan (RMP) Program:**
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**US EPA Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) under the Minimum Risk Exemption:**

Citric acid

**U.S. - DEA List II or Essential Chemicals:**
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**U.S. - DEA - Exempt Chemical Mixtures - List 1 and 2:**
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**US DHS Chemical Facility Anti-Terrorism Standards (CFATS):**

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

**CERCLA Chemicals and RQs:**
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

## Section 16. Other information

**Revision Date** 2 October, 2026

**DISCLAIMER OF RESPONSIBILITY**
The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume damage or expense arising out of or in any way responsibility and expressly disclaim liability for loss, connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

The full text of the phrases appearing in section 3 is:

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

**End of Document**