

MSDS# 05200

Section 1 - Chemical Product and Company Identification

MSDS Name: Citric acid, anhydrous

Catalog Numbers: AC110450000, AC110450010, AC110450050, AC110450250, AC220340000, AC220341000, AC220341000, AC220345000, AC329860000, AC329860010, AC423560000, AC423560050, AC423560050, 42356-0020, 42356-5000, A940-1, A940-1LC, A940-250LB, A940-500, A95-250LB, A95-3, A95-SAM1, A95-SAM2, A95-SAM3, BP339-500

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

Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100

Emergency Number US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#: 77-92-9

Chemical Name: Citric acid

%: >99

EINECS#: 201-069-1

Hazard Symbols: XI



Risk Phrases: 36/37/38

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Causes severe eye irritation and possible injury. Causes skin and respiratory tract irritation. Target Organs: Respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes severe eye irritation and possible injury.

Skin: Causes skin irritation.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Excessive intake of citric acid may cause erosion of the teeth.

Inhalation: Causes respiratory tract irritation.

Chronic: Repeated exposure may cause erosion of teeth. Chronic exposure may cause effects similar to those of acute exposure.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

Skin: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician:

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. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Autoignition Temperature: 1010 deg C (1,850.00 deg F)

Flash Point: Not applicable.

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 3; flammability: 1; instability: 0;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation. Spill may be carefully neutralized with lime (calcium oxide, CaO).

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Keep container tightly closed. Avoid ingestion and inhalation. Do not get in eyes. Avoid contact with skin and clothing.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Citric acid	none listed	none listed	none listed

OSHA Vacated PELs: Citric acid: None listed

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: The absence of published exposure limits does not mean that a substance poses no inhalation hazard. If inhalation exposure is likely or if irritation or other symptoms are experienced, wear a NIOSH/MSHA or European Standard EN 149 approved respirator.

Section 9 - Physical and Chemical Properties

Physical State: Crystalline powder

Color: white

Odor: Odorless.

pH: 1.7 (10% soln)

Vapor Pressure: 3.70E-009 mm Hg @ 25 deg C

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: 175 deg C (347.00°F)

Freezing/Melting Point: 153 deg C (307.40°F)

Decomposition Temperature:

Solubility in water: 59.2% (20°C)

Specific Gravity/Density: 1.665 g/cm³

Molecular Formula: C₆H₈O₇

Molecular Weight: 192.12

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Dust generation, moisture.

Incompatibilities with Other Materials Metals, strong oxidizing agents, strong reducing agents, strong bases, metal nitrates.

Hazardous Decomposition Products Carbon monoxide, carbon monoxide, carbon dioxide.

Hazardous Polymerization Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 77-92-9: GE7350000

RTECS:

CAS# 77-92-9: Draize test, rabbit, eye: 750 ug/24H Severe;

LD50/LC50: Draize test, rabbit, skin: 500 mg/24H Mild;

Oral, mouse: LD50 = 5040 mg/kg;

Oral, rat: LD50 = 3 gm/kg;

Carcinogenicity: Citric acid - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Not Regulated

Hazard Class:

UN Number:

Packing Group:

Canada TDG

Shipping Name: Not regulated as a hazardous material

Hazard Class:

UN Number:

Packing Group:

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:

R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 37/39 Wear suitable gloves and eye/face protection.

WGK (Water Danger/Protection)

CAS# 77-92-9: 0

Canada

CAS# 77-92-9 is listed on Canada's DSL List

Canadian WHMIS Classifications: D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 77-92-9 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 77-92-9 is listed on the TSCA
Inventory.

Section 16 - Other Information

MSDS Creation Date: 2/09/1999

Revision #10 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
