

Material Safety Data Sheet

Martrex, Inc.
P.O. Box 1709
Minnetonka, MN 55345-3793

IDENTITY (As used on label and list)
Citric Acid Anhydrous, USP/FCC

Issue Date: July 23, 1996

Section I

Distributor's Name
Martrex, Inc.
P.O. Box 1709
Minnetonka, MN 55345-3793

Emergency Telephone Number (Chemtrec)
(800) 424-9300
(703) 527-3887

Section II - Hazardous Ingredients/Identity Information

Hazardous Components (Chemical Identity; Common Name) OSHA PEL ACGIH TLV

Hazard Data

Citric Acid, 2-Hydroxy -1,2,3 - propanetricarboxylic acid
Cas No. 77-92-9 C, H, O

N/A N/A
ori-rat LD, 11.700 mg/kg
dermal acute 500 mg/24 hr moderate
Eye 750 mg/24 hr severe

Section III - Physical/Chemical Characteristics

Boiling Point

Not applicable - solid

Specific Gravity (H2O = 1)

1.665

Vapor Pressure (mm Hg)

Not applicable - solid

Melting Point

153°C

Vapor Density (Air = 1)

Not applicable

Evaporation Rate (Butyl Acetate = 1)

< 1

Solubility in water

Greater than 50%

Appearance and Odor

White odorless powder and/or granules

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used)
Ignition temp. 1000 - 1020°C

Flammable Limits LEL UEL
Min. 8 g/cuft NA NA
Opt. 65 g/cuft

Extinguishing Media

Water, carbon dioxide, foam, powder extinguisher

Special Fire Fighting Procedures

Fire fighters wear protective clothing and NIOSH approved respirator.

Unusual Fire and Explosion Hazards

None - At optimum air concentration Bureau of Mines Relative: Explosive rating = Weak

Section V - Reactivity Data

Stability Stable Unstable

Stable under normal conditions

Conditions to Avoid

None known

Incompatibility (Materials to Avoid)

Metal nitrates and strong oxidizers

Hazardous Decomposition or Byproducts

None Known

Hazardous polymerization May Occur Will Not Occur
Will not occur

Conditions to Avoid
None known

Section VI - Health Hazard Data

Routes of Entry Inhalation Skin Ingestion
Skin contact, Ingestion, Inhalation of mist.

Health Hazards (Acute and Chronic)
Prolonged contact with the product may cause irritation.

Carcinogenicity	NTP?	IARC Monographs?	OSHA Regulated?
No	No	No	No

Signs and Symptoms of Exposure
May be slight eye irritant, long term exposure to skin could be a mild irritant.

Medical Conditions Generally Aggravated by Exposure
No information available.

Emergency and First Aid Procedures
Eyes - immediately flush with plenty of water for 15 minutes. Call a physician.
Skin - wash area with water, remove contaminated clothing and launder before reuse.

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case of Material is Released or Spilled
Recover by vacuum or broom and shovel. Flush area with water to remove final traces.

Waste Disposal Method
Conform to applicable federal, state and local regulations
Landfill or neutralize and flush to drain. Material is biodegradable in waste treatment facility.

Precautions to Be Taken in Handling and Storing
Store in a dry area.

Other Precautions
Aqueous solutions of Citric Acid can, if in contact with reactive metal (iron, zinc, aluminum) form hydrogen which may form explosive mixtures.

Section VIII - Control Measures

Respiratory Protection (Specify Type)
NIOSH approved chemical respirator with dust and mist filter while handling crystalline material and concentrated solutions.

Ventilation	Local Exhaust	Mechanical (General)	Special	Other
Local exhaust sufficient to control dust.				

Protective Gloves	Eye Protection
Standard work gloves	Safety Glasses

Other Protective Clothing or Equipment
None

This MSDS is based upon a limited review of Martrex, Inc. files and standard Toxicological handbooks. The information herein is furnished without warranty of any kind. This information should only be used as a supplement to information already in your possession concerning the product. The determination of whether and under what conditions the product should be used by your employees is yours to make.