

Best

MATERIAL SAFETY DATA SHEET
GENIUM PUBLISHING CORPORATION
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MSDS # 533
CITRIC ACID
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From Genium's MSDS Collection, to be used as a reference.

SECTION 1. MATERIAL IDENTIFICATION

MATERIAL NAME: CITRIC ACID, Anhydrous, USP
 Other designations: B-Hydroxytricarballic Acid, 2 hydroxy-1,2,3 - propanetricarboxylic Acid, C₆H₈O₇;
 CAS #000 077 929.
Manufacturer: Suppliers include: Pfizer Chemicals Div. and Allied Chemical Company
 235 E. 42nd Street PO Box 2219
 New York, NY 10017 Columbus, OH 43216
 (201) 546-7721 (614) 889-3333

SECTION 2. INGREDIENTS AND HAZARDS

	%	HAZARD DATA
Citric Acid	99.5	No exposure limits have been established. Rabbit, skin: 500 mg/24hr: moderate irritation. Rabbit, eye: 0.75 mg/24 hr: Severe irritation. Rat, oral: LD50: 11700 mg/kg.

SECTION 3. PHYSICAL DATA

Melting Point, - 153°C
 Density (18/4 C) - 1.665 g/ml
 Solubility in Water @ 20°C - 59.2 g/100ml
 Molecular Weight - 192.14
Appearance & Odor: White granules or powder. Odorless.

SECTION 4. FIRE AND EXPLOSION DATA

Flash Point and Method	Autoignition Temp.	Flammability Limits in Air	Lower	Upper
N/A	1000 - 1020°C			

Extinguishing Media: Water, fog, CO₂ or dry chemical.
Firefighters should wear self-contained breathing apparatus with a full facepiece.

SECTION 5. REACTIVITY DATA

This material is stable at room temperature under normal storage and use conditions. It melts at 153°C, and at 175°C begins to convert to various organic compounds (aconitic acid, acetonedicarboxylic acid, acetone) with the evolution of carbon dioxide.
 Aqueous solutions of citric acid can be mildly corrosive to carbon steels, but does not attack stainless steel.
 As an organic acid, this material will react with bases. Contact with strong alkalis should be avoided.

SECTION 6. HEALTH HAZARD INFORMATION	TLV None established.
<p>Citric acid occurs naturally in the body as a metabolite in the tricarboxylic acid (Krebs) cycle. It is an approved general purpose food additive. Although this material is not considered to present a significant industrial health hazard, excessive exposure may result in irritation of the eyes, skin, and mucous membranes of the respiratory tract.</p> <p>FIRST AID: <u>EYE CONTACT:</u> Flush eyes, including under the eyelids, with large amounts of water. If irritation persists, get medical attention (In-plant, Paramedics, Community). <u>SKIN CONTACT:</u> Wash effected area with soap and water. If irritation persists, seek medical attention. <u>INHALATION:</u> . Remove person to fresh air. <u>INGESTION:</u> If substantial quantities are ingested, rinse mouth and give person 2 or 3 glasses of milk or water to drink. Seek medical attention (In-plant, Paramedic, Community).</p>	
SECTION 7. SPILL, LEAK AND DISPOSAL PROCEDURES	
<p>For powder spills, carefully scoop up material into a suitable container. For spills of aqueous solutions of Citric Acid, neutralize spill with Sodium Bicarbonate. Scoop up slurry into a suitable container. Flush area with copious amounts of water. Clean-up personnel should wear approved respiratory protection, rubber gloves and goggles to prevent irritation from contact and/or inhalation.</p> <p><u>DISPOSAL:</u> Solid waste may be packaged in paper or dissolved in a flammable solvent and burned in an approved incinerator. Follow local, State and Federal regulations.</p>	
SECTION 8. SPECIAL PROTECTION INFORMATION	
<p>Provide adequate general and local ventilation to control dust levels to no more than the nuisance dust TLV (ACGIH: 10 mg/m³; OSHA: 15 mg/m³). If the material is melted, additional ventilation may be required to control vapors.</p> <p>A NIOSH-approved respirator and safety goggles should be worn where dusting occurs, especially above the nuisance dust TLV. Gloves are recommended when prolonged or repeated contact is likely.</p> <p>Provide eyewash stations in work areas where eye contact is possible.</p> <p>Contact lenses pose a special hazard; soft lenses may absorb and all lenses concentrate irritants.</p>	
SECTION 9. SPECIAL PRECAUTIONS AND COMMENTS	
<p>Store in a cool dry area. Protect containers from physical damage.</p>	
<p>DATA SOURCE(S) CODE (See Glossary) 1, 4, 11, 54, 55.</p>	
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