

MATERIAL SAFETY DATA SHEET

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HEALTH = 1, FLAMMABILITY = 0, REACTIVITY = 0, SPECIAL = NONE, DEGREE OF HAZARD: 4 = EXTREME, 3 = HIGH, 2 = MODERATE, 1 = SLIGHT, 0 = INSIGNIFICANT

PRODUCT NAME: **CITRIC ACID**

DOCUMENT CODE: Citric Acid

DATE REVIEWED: 08/13/99

CHEMICAL FAMILY: Aliphatic acid

EMERGENCY 24-HOUR TELEPHONE # 1-800-424-9300 (CHEMTREC)

N/A = Not applicable

N/D = Not determined

SECTION I: HAZARDOUS INGREDIENTS/HEALTH HAZARD DATA

This product has not been tested as a whole for health effects on animals or humans. According to the OSHA Hazardous Communications Standard (29 CFR 1910.1200) any hazardous ingredients that comprise >1.0% of the material and any carcinogenic ingredients that comprise >0.1% must be listed on the MSDS.

SECTION I (a): List of carcinogenic ingredients at >0.1%.

None.

SECTION I (b): List of hazardous ingredients at >1.0%.

NAME	CAS NO.
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CITRIC ACID	77-92-9
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May cause eye, skin and respiratory irritation. Oral rat LD50 is 11.7 g/kg.

SECTION II: EMERGENCY AND FIRST AID PROCEDURES

EYES: Flush with water for at least 15 minutes. Consult physician.

SKIN: Remove contaminated clothing. Flush exposed skin with water.

INHALED: Remove to fresh air. If symptoms persist consult physician.

INGESTION: Generally recognized as safe for use in foods by FDA. See SECTION I.

PHYSICIAN: Treatment based on judgment of attending physician.

SECTION III: PHYSICAL / CHEMICAL DATA

APPEARANCE AND ODOR: White crystalline powder, odorless.

WATER SOLUBILITY, % BY WT: >50% LOOSE BULK DENSITY: 1.5 g/cc

BOILING POINT: N/A

% VOLATILE BY WT: negligible pH @ USE: 1.5 - 2.5

SECTION IV: FIRE AND EXPLOSION DATA

FLASH POINT: N/A AUTO-IGNITION TEMPERATURE: N/D

EXPLOSIVE LIMITS - LEL: 0.28 kg/m³ UEL: 2.29 kg/m³EXTINGUISHING MEDIA: Foam, CO₂, water fog and dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES: Use NIOSH/MSHA approved self-contained positive-pressure breathing apparatus and protective clothing where this material is involved in a fire.

UNUSUAL FIRE AND EXPLOSION HAZARD: None known.

SECTION V: REACTIVITY DATA

STABILITY: Stable HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBILITY: Corrosive to copper, zinc, aluminum and their alloys.

HAZARDOUS DECOMPOSITION/COMBUSTION PRODUCTS: Possibly CO, CO₂, H₂O and unidentified organic compounds.**SECTION VI: SPILLS, LEAKS AND DISPOSAL PROCEDURES**

WASTE DISPOSAL: In accordance with Federal, State and Local regulations.

NEUTRALIZING CHEMICALS: Dilute with water, then neutralize with baking soda or sodium hydroxide.

SECTION VII: PROTECTION MEASURES

VENTILATION: Usually not required.

EYE PROTECTION: Safety glasses.

RESPIRATORY PROTECTION: Use NIOSH/MSHA approved dust mask when airborne dust is anticipated.

GLOVES: Rubber gloves.

OTHER PROTECTIVE EQUIPMENT: Body-covering clothing should be worn.

SECTION VIII: SPECIAL PRECAUTIONS

One should always use chemicals with awareness of potential hazards, known and unknown, and their effect on the human system. We urge users to minimize employee exposure to all chemicals, including this product and to keep the level of exposure commensurate with good industrial hygiene practices.

DISCLAIMER OF LIABILITY

The manufacturer and seller warrants that this product conforms to its standard specifications when used according to directions. As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true and accurate but all statements or suggestions are made without any warranty, expressed or implied, regarding accuracy of the information, the hazards connected with the use of the material and the results to be obtained from the use thereof.