



UNIVAR

Univar USA Inc.
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For Emergency Assistance involving chemicals call - CHEMTREC (800) 424-9300

The Version Date for this MSDS is : 08/06/2004

PRODUCT IDENTIFICATION

PRODUCT NAME CITRIC ACID ALL GRADES - SOLID
MSDS# P21822VS
DATE ISSUED: 2/2/99
SUPERSEDES: 7/23/96
ISSUED BY: 008074
REVIEWED DATE: 8/6/2004
 This MSDS has been reviewed on 8/6/2004 and is
 Current as of the DATE ISSUED above.

Material Safety Data Sheet

Complies with OSHA'S Hazard Communication Standard 29CFR 1910.1200

CITRIC ACID Emergency Phone Number CHEMTREC: 800-424-9300

I. PRODUCT IDENTIFICATION:

PRODUCT NAME.....: Citric Acid, Anhydrous, FCC, USP
CHEMICAL FAMILY.....: Organic Acid
CHEMICAL NAME.....: 2-Hydroxy-1,2,3 Propanetricarboxylic Acid
CAS NUMBER.....: 77-92-9 Anhydrous
 5949-29-1 Monohydrate

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 II. HAZARDOUS INGREDIENTS:

INGREDIENT NAME /CAS NUMBER	EXPOSURE LIMITS	CONCENTRATION (%)
2-Hydroxy-1,2,3 Propanetricarboxylic Acid 77-92-9	OSHA : 5.000 mg/m3 (respirable dust) ACGIH: 5.000 mg/m3 (respirable dust)	100.000 %
Citric Acid Monohydrate 5949-29-1	Not Available	100.00 %

 III. PHYSICAL PROPERTIES:

PHYSICAL FORM.....: Crystals
 APPEARANCE.....: Free flowing crystalline
 COLOR.....: White
 ODOR.....: Odorless with a strong acid taste
 pH: Not Established
 BOILING POINT.....: Not Applicable
 MELTING/FREEZING POINT....: Not Applicable
 SOLUBILITY IN WATER: 59.2 g/100g at 68 F (20 C)
 SOLUBILITY (NON AQUEOUS)..: Methyl alcohol: 197 g/100g at 66.2 F (19 C)
 SPECIFIC GRAVITY: Not Established
 BULK DENSITY.....: Not Established
 % VOLATILE BY VOLUME.....: Not Applicable
 VAPOR PRESSURE: Not Applicable

 IV. FIRE AND EXPLOSION DATA:

FLASH POINT.....: Not Established
 AUTO-IGNITION TEMPERATURE.....: Not Established
 EXTINGUISHING MEDIA.....: Water; Dry Chemical; Carbon Dioxide
 SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes. Avoid dusting. Dust can form explosive mixtures with air.

 V. HUMAN HEALTH DATA:

ROUTE(S) OF ENTRY.....: Inhalation; Skin Contact; Eye Contact

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE:

ACUTE SKIN CONTACT.....: This product is irritating to the skin resulting in reddening, stinging, and swelling.

ACUTE EYE CONTACT.....: This product is irritating to the eyes resulting in stinging, reddening, tearing, and swelling.

ACUTE INHALATION: Causes respiratory tract irritation.

CHRONIC EFFECTS OF EXPOSURE...: No applicable information was found concernin any adverse chronic health effects from overexposure to this product.

CARCINOGENICITY.....: The components of this product are not listed by NTP, IARC or regulated as a carcinogen by OSHA.

MEDICAL CONDITIONS

AGGRAVATED BY EXPOSURE.....: Persons with pre-existing eye or skin disorders may be more susceptible to the effects of this product.

EXPOSURE LIMITS.....:

Although no exposure limit has been established for this product, the OSHA-PEL for nuisance dust of 15 mg/m3-total dust, 5 mg/m3-respirable dust is recommended. In addition, the ACGIH-TLV for nuisance dust of 10 mg/m3 is recommended.

VI. EMERGENCY AND FIRST AID PROCEDURES:

FIRST AID FOR EYES.....: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician immediately.

FIRST AID FOR SKIN.....:

In case of contact, remove contaminated clothing, and flush skin with plenty of water for at least 15 minutes. Wash clothing before reuse. Call a physician.

FIRST AID FOR INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

FIRST AID FOR INGESTION.: If swallowed, call a physician.

VII. EMPLOYEE PROTECTION RECOMMENDATIONS:

EYE PROTECTION REQUIREMENTS.....: Chemical safety goggles.

SKIN PROTECTION REQUIREMENTS.....: Rubber or vinyl gloves and long sleeved shirts and pants to minimize skin contact. Employees should wash their hands and face before eating, drinking or using tobacco products.

RESPIRATOR REQUIREMENTS.....: Work ambient concentrations should be monitored and if the recommended exposure limit is exceeded, a NIOSH/MSHA approved dust respirator should be worn.

VENTILATION REQUIREMENTS.....: Use local ventilation if dusting is a problem, to maintain air levels below the recommended exposure limit.

ADDITIONAL PROTECTIVE MEASURES.....: Emergency showers and eye wash stations should be made available. Educate and train employees in the safe use and handling of this product.

VIII. REACTIVITY DATA:

STABILITY.....: This is a stable material.

HAZARDOUS POLYMERIZATION...: Will not occur.

INCOMPATIBILITIES.....: Reaction with caustic can create heat (strong

exotherm). Solutions are mildly corrosive to carbon steel.

INSTABILITY CONDITIONS.....: None Known.

DECOMPOSITION PRODUCTS.....: In case of fire CO, CO2 and other potentially toxic fumes.

IX. SPILL AND LEAK PROCEDURES:

SPILL OR LEAK PROCEDURES.....: Clean by vacuum or broom sweeping and remove to disposal container.

WASTE DISPOSAL METHOD.....: Cover with soda ash or sodium bicarbonate to neutralize. Mix and add water if necessary. Scoop up slurry and dispose in accordance with existing federal, state and local environmental control regulations.

X. SPECIAL PRECAUTIONS & STORAGE DATA:

STORAGE TEMPERATURE (MIN/MAX): Max. 405 F (207 C) (product deteriorates)

SHELF LIFE.....: Not Established

SPECIAL SENSITIVITY.....: None Known.

HANDLING/STORAGE PRECAUTIONS: Avoid breathing dust. Avoid contact with eyes and skin. Wash thoroughly after handling. Store in a dry place away from excessive heat, in original or similar waterproof containers. Avoid air conveying of powdered product due to potential of static buildup. Reseal containers immediately after use.

XI. SHIPPING INFORMATION:

TECHNICAL SHIPPING NAME.....: Organic Acid

FREIGHT CLASS BULK.....: Chemicals, NOI

FREIGHT CLASS PACKAGE.....: Chemicals, NOI, (NMFC 60000)

PRODUCT LABEL.....: Citric Acid, Anhydrous, FCC, USP

DOT (HM-181) (DOMESTIC SURFACE)

HAZARD CLASS OR DIVISION: Non-Regulated

IMO / IMDG CODE (OCEAN)

HAZARD CLASS DIVISION NUMBER...: Non-Regulated

ICAO / IATA (AIR)

HAZARD CLASS DIVISION NUMBER...: Non-Regulated

XII. ANIMAL TOXICITY DATA:

NO ANIMAL TOXICITY INFORMATION AVAILABLE

XIII. FEDERAL REGULATORY INFORMATION:

OSHA STATUS.....: This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA STATUS.....: On TSCA Inventory

CERCLA REPORTABLE QUANTITY...: None

SARA REPORTABLE QUANTITY.: Exempt from SARA Title III reporting; contains no section 313 toxic chemical. It may contain up to the FCC limits for arsenic (1 ppm), lead (0.5 ppm), and heavy metals (5 ppm, as lead).

RCRA STATUS.....: If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

FDA STATUS.....: Citric Acid meets the specifications given in the Third Edition of the Food Chemicals Codex and is in chemical compliance with 21 CFR 182.1033 as a Multiple Purpose Generally Recognized As Safe Food Substance. Citric Acid meets the specifications given in the USP XXII including USP XXII Supplement 7.

XIV. OTHER REGULATORY INFORMATION:

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

COMPONENT NAME /CAS NUMBER	CONCENTRATION	STATE CODE
2-Hydroxy-1,2,3 Propanetricarboxylic Acid 77-92-9	100.000 %	PA3, NJ4

NJ4 = New Jersey Other - included in 5 predominant ingredients > 1%

PA3 = Pennsylvania Non-hazardous present at 3% or greater.

HMIS RATINGS: Health 1, Flammability 0, Reactivity 0. 0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

Method of hazard communication is comprised of Product Labels and Material Safety Data Sheets. HMIS ratings are provided as a customer

service.

For Additional Information:

Contact: MSDS Coordinator - Univar USA

During business hours, Pacific Time - (425) 889-3400

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END OF MSDS