

CITRIC ACID ANHYD USP GRAN

REVISION OF: 06-08-88

SHIP TO:

17010427
DURASTILL INC
ATTN: PRESIDENT
4200 BIRMINGHAM ROAD

ORDER NO: 179507186
PROD NO: 04099371

IN KANSAS CITY MO 64117

VAN WATERS & ROGERS INC. 1600 NORTON BLDG. SEATTLE, WA 98104-1564

EMERGENCY ASSISTANCE

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL CHEMTREC
(800) 424-9300.

FOR PRODUCT AND SALES INFORMATION

CONTACT YOUR LOCAL VAN WATERS & ROGERS BRANCH OFFICE

PRODUCT IDENTIFICATION

PRODUCT NAME: CITRIC ACID, ANHYDROUS
COMMON NAMES/SYNONYMS: CITRIC ACID,
ANHYDROUS; 2-HYDROXY-1,2,3-PROPANETRICARBOXYLIC

CAS NO.: 77-92-9
VW&R CODE: T1145

FORMULA: C6 H8 O7
HAZARD RATING (MANUFACTURER)
HEALTH: 1
FIRE: 0
REACTIVITY: 0
SPECIAL: NONE

DATE ISSUED: 10/87
SUPERCEDES: NONE
HAZARD RATING SCALE:
0=MINIMAL 3=SERIOUS
1=SLIGHT 4=SEVERE
2=MODERATE

HAZARDOUS INGREDIENTS

COMPONENT	CAS NO.	%	EXPOSURE LIMITS, PPM			HAZARD
			OSHA PEL	ACGIH TLV	OTHER LIMIT	
CITRIC ACID	77-92-9	>99	NONE	NONE	NONE	NONE

PHYSICAL PROPERTIES

MELTING POINT, DEG F: N/D VAPOR PRESSURE, MM HG/20 DEG C: N/A
BOILING POINT, DEG F: APPROX. 300 VAPOR DENSITY (AIR=1): N/A
SPECIFIC GRAVITY (WATER=1): 1.665 WATER SOLUBILITY, %: 50
APPEARANCE AND ODOR: ODOR- EVAPORATION RATE (BUTYL ACETATE=1): NIL
FINE, WHITE CRYSTALS

FIRST AID MEASURES

IF INHALED: REMOVE TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET IMMEDIATE MEDICAL ATTENTION.

IN CASE OF EYE CONTACT: IMMEDIATELY FLUSH EYES WITH LOTS OF RUNNING WATER FOR 15 MINUTES, LIFTING THE UPPER AND LOWER EYELIDS OCCASIONALLY. GET IMMEDIATE MEDICAL ATTENTION.

IN CASE OF SKIN CONTACT: IMMEDIATELY WASH SKIN WITH LOTS OF SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND SHOES; WASH BEFORE REUSE. GET MEDICAL ATTENTION IF IRRITATION PERSISTS AFTER WASHING.

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IF SWALLOWED: TREATMENT NOT NORMALLY REQUIRED.

-----HEALTH HAZARD INFORMATION-----

PRIMARY ROUTES OF EXPOSURE: SKIN CONTACT.

SIGNS AND SYMPTOMS OF EXPOSURE

INHALATION: BREATHING DUST MAY IRRITATE THE NOSE AND THROAT AND CAUSE COUGHING AND CHEST DISCOMFORT.

EYE CONTACT: DUSTS MAY IRRITATE THE EYES.

SKIN CONTACT: NO IRRITATION IS LIKELY AFTER BRIEF CONTACT BUT MAY BE IRRITATING AFTER PROLONGED CONTACT.

SWALLOWED: NONE CURRENTLY KNOWN.

CHRONIC EFFECTS OF EXPOSURE: PROLONGED EXPOSURE MAY DAMAGE TOOTH ENAMEL.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NONE REPORTED.

-----TOXICITY DATA-----

ORAL: RAT, LD50 = 11,700 MG/KG

DERMAL: RABBIT 500 MG/24 HR = MODERATE IRRITATION

INHALATION: NOT ESTABLISHED

CARCINOGENICITY: THIS MATERIAL IS NOT CONSIDERED TO BE A CARCINOGEN BY THE NATIONAL TOXICOLOGY PROGRAM, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, OR THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

OTHER DATA: NONE

-----PERSONAL PROTECTION-----

VENTILATION: LOCAL MECHANICAL EXHAUST VENTILATION CAPABLE OF MINIMIZING DUST EMISSIONS AT THE POINT OF USE.

RESPIRATORY PROTECTION: A RESPIRATOR IS NORMALLY NOT REQUIRED IF THIS PRODUCT IS USED WITH ADEQUATE VENTILATION.

EYE PROTECTION: CHEMICAL GOGGLES. IT IS GENERALLY RECOGNIZED THAT CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH CHEMICALS BECAUSE CONTACT LENSES MAY CONTRIBUTE TO THE SEVERITY OF AN EYE INJURY.

PROTECTIVE CLOTHING: LONG-SLEEVED SHIRT, TROUSERS, SAFETY SHOES, AND GLOVES.

OTHER PROTECTIVE MEASURES: AN EYEWASH AND SAFETY SHOWER SHOULD BE NEARBY AND READY FOR USE.

-----FIRE AND EXPLOSION INFORMATION-----

FLASH POINT, DEG F: NONE

FLAMMABLE LIMITS IN AIR, %

METHOD USED: N/A

LOWER: N/D UPPER: N/D

EXTINGUISHING MEDIA: THIS MATERIAL IS NOT COMBUSTIBLE. USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING FIRE.

SPECIAL FIRE FIGHTING PROCEDURES: NONE.

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE.

-----HAZARDOUS REACTIVITY-----

STABILITY: STABLE

POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID: NONE

MATERIALS TO AVOID: STRONG ALKALIES

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HAZARDOUS DECOMPOSITION PRODUCTS: NONE

-----SPILL, LEAK, AND DISPOSAL PROCEDURES-----

ACTION TO TAKE FOR SPILLS OR LEAKS: WEAR PROTECTIVE EQUIPMENT INCLUDING RUBBER BOOTS, RUBBER GLOVES, RUBBER APRON, AND A FULL FACEPIECE OR A HALF MASK AIR-PURIFYING CARTRIDGE RESPIRATOR WITH PARTICULATE FILTERS. WEAR CHEMICAL GOGGLES IF A HALF MASK IS WORN. FOR SMALL SPILLS, SWEEP UP AND DISPOSE OF IN DOT-APPROVED WASTE CONTAINERS. FOR LARGE SPILLS, SHOVEL INTO DOT-APPROVED WASTE CONTAINERS. KEEP OUT OF SEWERS, STORM DRAINS, SURFACE WATERS, AND SOIL. COMPLY WITH ALL APPLICABLE GOVERNMENTAL REGULATIONS ON SPILL REPORTING, AND HANDLING AND DISPOSAL OF WASTE.

DISPOSAL METHODS: DISPOSE OF CONTAMINATED PRODUCT AND MATERIALS USED IN CLEANING UP SPILLS OR LEAKS IN A MANNER APPROVED FOR THIS MATERIAL. CONSULT APPROPRIATE FEDERAL, STATE AND LOCAL REGULATORY AGENCIES TO ASCERTAIN PROPER DISPOSAL PROCEDURES.

NOTE: EMPTY CONTAINERS CAN HAVE RESIDUES, GASES AND MISTS AND ARE SUBJECT TO PROPER WASTE DISPOSAL, AS ABOVE.

-----SPECIAL PRECAUTIONS-----

STORAGE AND HANDLING PRECAUTIONS: STORE IN A COOL, DRY, WELL-VENTILATED PLACE AWAY FROM INCOMPATIBLE MATERIALS. KEEP BAGS OR FIBER DRUMS DRY AT ALL TIMES. WASH THOROUGHLY AFTER HANDLING. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.

REPAIR AND MAINTENANCE PRECAUTIONS: NONE.

OTHER PRECAUTIONS: CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, WILL RETAIN PRODUCT RESIDUE AND VAPORS. ALWAYS OBEY HAZARD WARNINGS AND HANDLE EMPTY CONTAINERS AS IF THEY WERE FULL.

OTHER PRECAUTIONS: THIS PRODUCT IS INTENDED FOR USE IN FOOD, ANIMAL FEED, DRUG, OR COSMETIC MANUFACTURE AND IT HAS BEEN PRODUCED AND PACKAGED IN ACCORDANCE WITH STRICT QUALITY PRACTICES. MAINTAIN THIS QUALITY LEVEL BY STORING THIS PRODUCT AWAY FROM OTHER CHEMICALS, HANDLING IT WITH CARE, AND AVOIDING ALL SOURCES OF CONTAMINATION.

-----FOR ADDITIONAL INFORMATION-----

CONTACT DOUGLAS EISNER, TECHNICAL DIRECTOR, VAN WATERS & ROGERS INC. DURING BUSINESS HOURS, PACIFIC TIME (206)447-5911

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