

OXALIC ACID, DIHYDRATE
MATERIAL SAFETY DATA SHEET

ISSUED: 03/01/92

SECTION I - PRODUCT IDENTIFICATION

SUPPLIER: SYNCHM/CHIPPENHAM CORP.
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LABORATORY HOSPITAL
HOUSEKEEPING DEPARTMENT

EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 NOTE: EMERGENCY TELEPHONE NUMBERS ARE TO BE USED ONLY IN THE EVENT OF CHEMICAL EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT INVOLVING CHEMICALS. ALL NON-EMERGENCY QUESTIONS SHOULD BE DIRECTED TO CUSTOMER SERVICE.

PRODUCT NAME: OXALIC ACID, DIHYDRATE
COMMON SYNONYMS: ETHANEDIOIC ACID, DIHYDRATE; ETHANPIONIC ACID, DIHYDRATE
CHEMICAL FAMILY: ORGANIC ACIDS
FORMULA: HOCOCOOH 2H2O
FORMULA WT.: 126.07
CAS NO.: 6153-56-6
NIOSH/RETECS NO.: R02450000
PRODUCT USE: FOR INDUSTRIAL USE ONLY

PRECAUTIONARY STATEMENT

HEALTH	- 2	MODERATE
FLAMMABILITY	- 1	SLIGHT
REACTIVITY	- 1	SLIGHT
CONTACT	- 3	SEVERE (CORROSIVE)

LABORATORY PROTECTIVE EQUIPMENT - GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES

U.S. PRECAUTIONARY STATEMENT

DANGER; CAUSES SEVERE BURNS. MAY BE FATAL IF SWALLOWED OR INHALED. EXCEPTIONAL HEALTH AND CONTACT HAZARDS: READ MATERIAL SAFETY DATA SHEET. DO NOT GET IN EYES, ON SKIN, ON CLOTHING. DO NOT BREATHE DUST. KEEP IN TIGHTLY CLOSED CONTAINER. USE WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING.

INTERNATIONAL STATEMENT

HARMFUL IN CONTACT WITH SKIN AND IF SWALLOWED. KEEP OUT OF REACH OF CHILDREN. AVOID CONTACT WITH SKIN AND EYES.

SECTION II - COMPONENTS

COMPONENT	CAS NO.	WEIGHT %	OSHA/PEL	ACGIH/TLV
OXALIC ACID, DIHYDRATE	6153-56-6	90-100	1 MG/M3	1 MG/M3

SECTION III - PHYSICAL DATA

BOILING POINT: N/A	VAPOR PRESSURE (MMHG): N/A
MELTING POINT: 101 C (213 F) (AT 760 MM HG)	DECOMPOSES VAPOR DENSITY (AIR=1): 4.3
SPECIFIC GRAVITY(H2O=1): 1.65	EVAPORATION RATE: N/A
SOLUBILITY(H2O): APPRECIABLE (>10%)	% VOLATILES BY VOLUME: 0 (21 C)
PH: N/A	
ODOR THRESHOLD (P.P.M.): N/A	PHYSICAL STATE: SOLID
COEFFICIENT WATER/OIL DISTRIBUTION: N/A	
APPEARANCE & ODOR: WHITE CRYSTALLINE SOLID. ODORLESS.	

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SECTION IV - FIRE AND EXPLOSION HAZARD DATA

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FLASH POINT (CLOSED CUP): N/A NFPA 704M RATING: 1-1-0
AUTOIGNITION TEMPERATURE: N/A
FLAMMABLE LIMITS: UPPER - N/A LOWER - N/A

FIRE EXTINGUISHING MEDIA - USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING FIRE.

SPECIAL FIRE-FIGHTING PROCEDURES

FIREFIGHTERS SHOULD WEAR PROPER PROTECTIVE EQUIPMENT AND SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN POSITIVE PRESSURE MODE. MOVE CONTAINERS FROM FIRE AREA IF IT CAN BE DONE WITHOUT RISK. USE WATER TO KEEP FIRE-EXPOSED CONTAINERS COOL.

UNUSUAL FIRE & EXPLOSION HAZARDS - NOTE: DECOMPOSES AT MELTING POINT.

TOXIC GASES PRODUCED - CARBON MONOXIDE, CARBON DIOXIDE

EXPLOSION DATA-SENSITIVITY TO MECHANICAL IMPACT - NONE IDENTIFIED.

EXPLOSION DATA-SENSITIVITY TO STATIC DISCHARGE - NONE IDENTIFIED.

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SECTION V - HEALTH HAZARD DATA

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THRESHOLD LIMIT VALUE (TLV/TWA): 1 MG/M3
SHORT-TERM EXPOSURE LIMIT (STEL): 2 MG/M3
PERMISSIBLE EXPOSURE LIMIT (PEL): 1 MG/M3

TOXICITY OF COMPONENTS

ORAL RAT LD50 FOR OXALIC ACID, DIHYDRATE 375 MG/KG
SKIN RABBIT LD50 FOR OXALIC ACID, DIHYDRATE 20 G/KG
CARCINOGENICITY: NTP: NO IARC: NO Z LIST: NO OSHA REG: NO

MUTAGENICITY - NONE IDENTIFIED.

REPRODUCTIVE EFFECTS - NONE IDENTIFIED.

EFFECTS OF OVEREXPOSURE

INHALATION: CORROSION OF MOUTH, THROAT, AND STOMACH, HEADACHE, COUGHING, DIFFICULT BREATHING, CHEST PAINS, SEVERE LUNG IRRITATION, PULMONARY EDEMA, AND MAY BE FATAL
SKIN CONTACT: SEVERE BURNS
EYE CONTACT: SEVERE BURNS

SKIN ABSORPTION: NONE IDENTIFIED
INGESTION: HEADACHE, NAUSEA, VOMITING, GASTROINTESTINAL IRRITATION, CONVULSIONS, BURNS TO MOUTH, THROAT, AND STOMACH, AND MAY BE FATAL

CHRONIC EFFECTS: KIDNEY DAMAGE

TARGET ORGANS - RESPIRATORY SYSTEM, EYES, SKIN, KIDNEYS, MUCOUS MEMBRANES

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

CHRONIC RESPIRATORY DISEASE, KIDNEY DISORDERS, SKIN DISORDERS

PRIMARY ROUTES OF ENTRY - INHALATION, INGESTION, ABSORPTION, EYE CONTACT, SKIN CONTACT

EMERGENCY AND FIRST AID PROCEDURES

INGESTION: CALL A PHYSICIAN. IF SWALLOWED, DO NOT INDUCE VOMITING. IF CONSCIOUS, GIVE WATER, MILK, OR MILK OF MAGNESIA.
INHALATION: IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. RINSE MOUTH OR GARGLE REPEATEDLY WITH COLD WATER.
SKIN CONTACT: IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.
EYE CONTACT: IN CASE OF EYE CONTACT, IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.

SARA/TITLE III HAZARD CATEGORIES AND LISTS

ACUTE: YES CHRONIC: YES FLAMMABILITY: NO PRESSURE: NO REACTIVITY: NO

EXTREMELY HAZARDOUS SUBSTANCE: NO
CERCLA HAZARDOUS SUBSTANCE: NO
SARA 313 TOXIC CHEMICALS: NO
TSCA INVENTORY: YES

SECTION VI - REACTIVITY DATA

STABILITY: STABLE HAZARDOUS POLYMERIZATION: WILL NOT OCCUR
CONDITIONS TO AVOID: HEAT
INCOMPATIBLES: STRONG OXIDIZING AGENTS, STRONG BASES, SILVER AND SILVER COMPOUNDS, MOST COMMON METALS
DECOMPOSITION PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE

SECTION VII - SPILL & DISPOSAL PROCEDURES

STEPS TO BE TAKEN IN THE EVENT OF A SPILL OR DISCHARGE

WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. WITH CLEAN SHOVEL, PLACE MATERIAL INTO CLEAN, DRY METAL CONTAINER AND COVER WITH DRY SAND, LIME OR SODA ASH. KEEP CONTAINER TIGHTLY COVERED.

DISPOSAL PROCEDURE

DISPOSE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL ENVIRONMENTAL REGULATIONS.

EPA HAZARDOUS WASTE NUMBER: D002 (CORROSIVE WASTE)

SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT

VENTILATION: USE GENERAL OR LOCAL EXHAUST VENTILATION TO MEET TLV REQUIREMENTS.
RESPIRATORY PROTECTION: RESPIRATORY PROTECTION REQUIRED IF AIRBORNE CONCENTRATION EXCEEDS TLV. AT CONCENTRATIONS UP TO 10 PPM, A HIGH-EFFICIENCY PARTICULATE RESPIRATOR IS RECOMMENDED. ABOVE THIS LEVEL, A SELF-CONTAINED BREATHING APPARATUS IS ADVISED.
EYE/SKIN PROTECTION: SAFETY GOGGLES, UNIFORM, APRON, RUBBER GLOVES ARE RECOMMENDED.

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SECTION IX - STORAGE AND HANDLING PRECAUTIONS

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STORAGE REQUIREMENTS

KEEP CONTAINER TIGHTLY CLOSED. STORE IN CORROSION-PROOF AREA. ISOLATE
FROM INCOMPATIBLE MATERIALS.

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SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

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DOMESTIC (D.O.T.)

PROPER SHIPPING NAME: OXALIC ACID, DIHYDRATE
HAZARD CLASS: ORM-A
UN/NA: UN1693
LABELS: NONE

U.S. CUSTOMS HARMONIZATION NUMBER: 29171100005

N/A = NOT APPLICABLE OR NOT AVAILABLE
N/E = NOT ESTABLISHED

THE INFORMATION IN THIS MATERIAL SAFETY DATA SHEET WAS PREPARED FROM INFORMATION RETRIEVED ON THE CHEMICAL INFORMATION SYSTEM AS PROVIDED BY CIS, INC. AND MEETS THE REQUIREMENTS OF THE UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ACT AND REGULATIONS PROMULGATED THEREUNDER (29 CFR 1910.1200 ET. SEQ.) AND THE CANADIAN WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. THIS DOCUMENT IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE PRECAUTIONARY HANDLING OF THE MATERIAL BY A PERSON TRAINED IN, OR SUPERVISED BY A PERSON TRAINED IN, CHEMICAL HANDLING. THE USER IS RESPONSIBLE FOR DETERMINING THE PRECAUTIONS AND DANGERS OF THIS CHEMICAL FOR HIS OR HER PARTICULAR APPLICATION. DEPENDING ON USAGE, PROTECTIVE CLOTHING INCLUDING EYE AND FACE GUARDS AND RESPIRATORS MUST BE USED TO AVOID CONTACT WITH MATERIAL OR BREATHING CHEMICAL VAPORS/FUMES. EXPOSURE TO THIS PRODUCT MAY HAVE SERIOUS ADVERSE HEALTH EFFECTS. THIS CHEMICAL MAY INTERACT WITH OTHER SUBSTANCES. SINCE THE POTENTIAL USES ARE SO VARIED, SUPPLIER CANNOT WARN OF ALL OF THE POTENTIAL DANGERS OF USE OR INTERACTION WITH OTHER CHEMICALS OR MATERIALS. SUPPLIER DISCLAIMS ANY WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR PURPOSE. THE USER SHOULD RECOGNIZE THAT THIS PRODUCT CAN CAUSE SEVERE INJURY AND EVEN DEATH, ESPECIALLY IF IMPROPERLY HANDLED OR THE KNOWN DANGERS OF USE ARE NOT HEEDDED. READ ALL PRECAUTIONARY INFORMATION. AS NEW DOCUMENTED GENERAL SAFETY INFORMATION BECOMES AVAILABLE, SUPPLIER WILL PERIODICALLY REVISE THIS MATERIAL SAFETY DATA SHEET. NOTE: CHEMTREC, CANUTEC, AND NATIONAL RESPONSE CENTER EMERGENCY TELEPHONE NUMBERS ARE TO BE USED ONLY IN THE EVENT OF CHEMICAL EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT INVOLVING CHEMICALS. ALL NON-EMERGENCY QUESTIONS SHOULD BE DIRECTED TO CUSTOMER SERVICE.