

MATERIAL SAFETY DATA SHEET

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SECTION 1. ----- CHEMICAL IDENTIFICATION-----

CODE #: 0326
NAME: OXALIC ACID DIHYDRATE
CAS#: 6153-56-6

SECTION 2. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

MF: C₂H₂O₄.2H₂O

EC NO: 205-634-3

SYNONYMS

ACIDE OXALIQUE (FRENCH) * ACIDO OSSALICO (ITALIAN) * AKTISAL *
AQUISAL * ETHANEDIOIC ACID * ETHANEDIONIC ACID * KYSELINA STAVELOVA
(CZECH) * NCI-C55209 * OXAALZUUR (DUTCH) * OXALIC ACID (ACGIH:OSHA) *
OXALSAEURE (GERMAN) *

SECTION 3. ----- HAZARDS IDENTIFICATION -----

LABEL PRECAUTIONARY STATEMENTS

CORROSIVE

TOXIC

HARMFUL IN CONTACT WITH SKIN AND IF SWALLOWED.

POSSIBLE RISK OF HARM TO THE UNBORN CHILD.

TARGET ORGAN(S):

KIDNEYS

NERVES

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF
WATER AND SEEK MEDICAL ADVICE.

TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING.

WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE
PROTECTION.

SECTION 4. ----- FIRST-AID MEASURES-----

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH COPIOUS
AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED
CLOTHING AND SHOES.

ASSURE ADEQUATE FLUSHING OF THE EYES BY SEPARATING THE EYELIDS
WITH FINGERS.

IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL
RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.

IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS.
CALL A PHYSICIAN IMMEDIATELY.

DISCARD CONTAMINATED CLOTHING AND SHOES.

SECTION 5. ----- FIRE FIGHTING MEASURES -----

EXTINGUISHING MEDIA

CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM.

SPECIAL FIREFIGHTING PROCEDURES

WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

UNUSUAL FIRE AND EXPLOSIONS HAZARDS

THIS MATERIAL, LIKE MOST MATERIALS IN POWDER FORM, IS CAPABLE OF CREATING A DUST EXPLOSION.

SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----

WEAR RESPIRATOR, CHEMICAL SAFETY GOGGLES, BOOTS AND HEAVY GLOVES.

SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL.

AVOID RAISING DUST.

VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

SECTION 7. ----- HANDLING AND STORAGE-----

REFER TO SECTION 8.

SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----

WEAR APPROPRIATE NIOSH/MSHA-APPROVED RESPIRATOR, CHEMICAL-RESISTANT GLOVES, SAFETY GOGGLES, OTHER PROTECTIVE CLOTHING.

SAFETY SHOWER AND EYE BATH.

USE ONLY IN A CHEMICAL FUME HOOD.

DO NOT BREATHE DUST.

DO NOT GET IN EYES, ON SKIN, ON CLOTHING.

AVOID PROLONGED OR REPEATED EXPOSURE.

WASH THOROUGHLY AFTER HANDLING.

KEEP TIGHTLY CLOSED.

STORE IN A COOL DRY PLACE.

SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES -----

APPEARANCE

SOLID.

PHYSICAL PROPERTIES

VAPOR PRESSURE: <0.01MM 20 C

VAPOR DENSITY: 4.4

SECTION 10. -----STABILITY AND REACTIVITY -----

STABILITY

STABLE.

INCOMPATIBILITIES

BASES

ACID CHLORIDES

ALKALI METALS

CORRODES STEEL

AVOID CONTACT WITH METALS.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS

TOXIC FUMES OF:

CARBON MONOXIDE, CARBON DIOXIDE

HAZARDOUS POLYMERIZATION

WILL NOT OCCUR.

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----**ACUTE EFFECTS**

HARMFUL IF SWALLOWED, ABSORBED THROUGH SKIN OR INHALED.
 MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES
 AND UPPER RESPIRATORY TRACT, EYES AND SKIN.
 INHALATION MAY RESULT IN SPASM, INFLAMMATION AND EDEMA OF THE
 LARYNX AND BRONCHI, CHEMICAL PNEUMONITIS AND PULMONARY EDEMA.
 SYMPTOMS OF EXPOSURE MAY INCLUDE BURNING SENSATION, COUGHING,
 WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, HEADACHE, NAUSEA AND
 VOMITING.

CHRONIC EFFECTS

POSSIBLE RISK OF CONGENITAL MALFORMATION IN THE FETUS.

TARGET ORGAN(S):

KIDNEYS

NERVES

BLOOD

EYES

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND
 TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

RTECS #: RO2450000

OXALIC ACID

IRRITATION DATA

SKN-RBT 500 MG/24H MLD	85JCAE -,311,1986
EYE-RBT 250 UG/24H SEV	85JCAE -,311,1986
EYE-RBT 100 MG/4S RINSE SEV	FCTOD7 20,573,1982

TOXICITY DATA

ORL-WMN LDLO:600 MG/KG	YKYUA6 31,959,1980
ORL-RAT LD50:7500 MG/KG	TXAPA9 42,417,1977
UNR-RAT LD50:1400 MG/KG	GISAAA 50(3),57,1985
IPR-MUS LD50:270 MG/KG	TXCYAC 62,203,1990

TARGET ORGAN DATA

GASTROINTESTINAL (CHANGES IN STRUCTURE OR FUNCTION OF ESOPHAGUS)

GASTROINTESTINAL (HYPERMOTILITY, DIARRHEA)

GASTROINTESTINAL (OTHER CHANGES)

ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES
 (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN RTECS FOR
 COMPLETE INFORMATION.

SECTION 12. ----- ECOLOGICAL INFORMATION -----

DATA NOT YET AVAILABLE.

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

OBSERVE ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. ----- TRANSPORT INFORMATION -----

UN#: 3261

PROPER SHIPPING NAME: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (CONTAINING
 OXALIC ACID)

PG: II

CLASS: 8

SECTION 15. ----- REGULATORY INFORMATION -----

EUROPEAN INFORMATION

EC INDEX NO: 607-006-00-8

CORROSIVE

R 34

CAUSES BURNS

R: 23/24/25

TOXIC BY INHALATION, IN CONTACT WITH SKIN AND IF SWALLOWED.

S: 36/37/39

WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.

REVIEWS, STANDARDS, AND REGULATIONS

OEL=MAK

ACGIH TLV-STEL 2 MG/M3

DTLVS* TLV/BEI,1996

ACGIH TLV-TWA 1 MG/M3

DTLVS* TLV/BEI,1996

EPA FIFRA 1988 PESTICIDE SUBJECT TO REGISTRATION OR RE-REGISTRATION

FEREAC 54,7740,1989

MSHA STANDARD-AIR:TWA 1 MG/M3

DTLVS* 3,193,1971

OSHA PEL (GEN INDU):8H TWA 1 MG/M3

CFRGBR 29,1910.1000,1994

OSHA PEL (CONSTRUC):8H TWA 1 MG/M3

CFRGBR 29,1926.55,1994

OSHA PEL (SHIPYARD):8H TWA 1 MG/M3

CFRGBR 29,1915.1000,1993

OSHA PEL (FED CONT):8H TWA 1 MG/M3

CFRGBR 41,50-204.50,1994

OEL-ARAB REPUBLIC OF EGYPT:TWA 1 MG/M3 JAN 1993

OEL-AUSTRALIA:TWA 1 MG/M3;STEL 2 MG/M3 JAN 1993

OEL-BELGIUM:TWA 1 MG/M3;STEL 2 MG/M3 JAN 1993

OEL-DENMARK:TWA 1 MG/M3 JAN 1993

OEL-FINLAND:TWA 1 MG/M3;STEL 3 MG/M3 JAN 1993

OEL-FRANCE:TWA 1 MG/M3 JAN 1993

OEL-THE NETHERLANDS:TWA 1 MG/M3 JAN 1993

OEL-THE PHILIPPINES:TWA 1 MG/M3 JAN 1993

OEL-SWITZERLAND:TWA 1 MG/M3 JAN 1993

OEL-UNITED KINGDOM:TWA 1 MG/M3;STEL 2 MG/M3 JAN 1993

OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA CHECK ACGIH TLV

OEL IN NEW ZEALAND, SINGAPORE, VIETNAM CHECK ACGIH TLV

NIOSH REL TO OXALIC ACID-AIR:10H TWA 1 MG/M3;STEL 2 MG/M3

NIOSH* DHHS #92-100,1992

NOHS 1974: HZD 52480; NIS 109; TNF 11395; NOS 66; TNE 180732

NOES 1983: HZD 52480; NIS 75; TNF 6866; NOS 84; TNE 142000; TFE 58727

EPA TSCA SECTION 8(B) CHEMICAL INVENTORY

EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, APRIL 1997

SECTION 16. ----- OTHER INFORMATION -----

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