

Material Safety Data Sheet

Martrex, Inc.
P.O. Box 1709
Minnetonka, MN 55345-3793

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION Page: 1

24-Hour Emergency Phone Number: Chemtrec # (800) 424-9300
(703) 527-3887

Product: EDTA Acid Chelating Agent

Effective Date: 02/25/99 Date Printed: 03/08/99

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Ethylenediaminetetraacetic acid	CAS# 000060-00-4	90-95%
Water	CAS# 007732-18-5	5-10%

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

White solid. Odorless. No significant immediate hazards for emergency response are known.

POTENTIAL HEALTH EFFECTS (See Section 11 for toxicological data)

EYE: May cause moderate eye irritation. May cause slight corneal injury.

SKIN: Prolonged exposure may cause skin irritation. Repeated exposure may cause skin burns. May cause more severe response if confined to skin or if skin is abraded (scratched or cut). A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. Not classified as corrosive according to DOT.

INGESTION: Single dose oral toxicity is considered to be low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing larger amounts may cause injury.

INHALATION: Vapors are unlikely due to physical properties. Single exposure to dust is not likely to be hazardous.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: No significant toxicologic effects were observed in laboratory animals fed the sodium salt of EDTA.

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CANCER INFORMATION: The trisodium salt of EDTA did not cause cancer in laboratory animals.

TERATOLOGY (BIRTH DEFECTS): EDTA and its sodium salts have been reported to cause birth defects in laboratory animals only at exaggerated doses that were toxic to the mother. These effects are likely associated with zinc deficiency due to chelation. Birth defects are unlikely. Exposures having no effect on the mother should have no effect on the fetus.

REPRODUCTIVE EFFECTS: Limited data in laboratory animals suggest that the material does not affect reproduction.

4. **FIRST AID**

EYE: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

SKIN: Wash off in flowing water or shower.

INGESTION: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

INHALATION: Remove to fresh air if effects occur. Consult a physician.

NOTE TO PHYSICIAN: There is no acceptable evidence that chelation therapy with EDTA is effective in the treatment of atherosclerosis, and the adverse effects of this drug can be lethal, Medical Letter, 23:p51 (1981). If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

5. **FIRE FIGHTING MEASURES**

FLAMMABLE PROPERTIES

FLASH POINT: Flash point data not required for a solid.

METHOD USED: Not determined.

FLAMMABILITY LIMITS

LFL: Not determined.

UFL: Not determined.

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HAZARDOUS COMBUSTION PRODUCTS: During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds. Hazardous combustion products may include and are not limited to: nitrogen oxides, ammonia.

OTHER FLAMMABILITY INFORMATION: Mechanical handling can cause formation of dusts. To reduce the potential for dust explosion, do not permit dust to accumulate

EXTINGUISHING MEDIA: Water, carbon dioxide, dry chemical.

FIRE FIGHTING INSTRUCTIONS: Keep people away. Isolate fire area and deny unnecessary entry. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this MSDS. Cool surroundings with water to localize fire zones. Hand held carbon dioxide or dry chemical extinguishers may be used for small fires. Soak thoroughly with water to cool and prevent re-ignition.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

6. ACCIDENTAL RELEASE MEASURES (See Section 15 for Regulatory Information)

PROTECT PEOPLE: Isolate area.

PROTECT THE ENVIRONMENT: Prevent wash water entering natural waterways or public water supplies.

CLEANUP: For large spills: sweep up. Spills should be cleaned up immediately using care to minimize generation of airborne dust.

7. HANDLING AND STORAGE

HANDLING: Good housekeeping and controlling of dusts are necessary for safe handling of product.

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STORAGE: Minimize sources of ignition, such as static buildup, heat, spark, or flame.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: Use chemical goggles.

SKIN PROTECTIONS: When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material. Selection of specific items such as faceshield, gloves, boots, apron, or full-body suit will depend on operation. If hands are cut or scratched, use gloves impervious to this material even for brief exposure.

RESPIRATORY PROTECTION: In dusty atmospheres, use an approved dust respirator.

EXPOSURE GUIDELINES: None established.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White solid.

ODOR: Odorless.

VAPOR PRESSURE: <0.01 mmHg

VAPOR DENSITY: Not applicable.

BOILING POINT: Not applicable.

SOLUBILITY IN WATER: 25C <0.03g/100g

SPECIFIC GRAVITY: Bulk density 54 lbs/cu ft

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under normal storage and use conditions.

CONDITIONS TO AVOID: None known.

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INCOMPATIBILITY WITH OTHER MATERIALS: Avoid contact with oxidizing materials . Avoid contact with metals such as carbon steel.

HAZARDOUS DECOMPOSITION PRODUCTS: Hazardous decomposition products may include and are not limited to ammonia and nitrogen oxides.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION (See Section 3 for Potential Health Effects. For detailed toxicological data, write or call the address or non-emergency number shown in Section 1).

SKIN: The dermal LD50 has not been determined.

INGESTION: The oral LD50 for rats is > 3980 mg/kg.

MUTAGENICITY: Most data indicate the EDTA and its salts are not mutagenic. Minimal effects reported are likely due to trace metal deficiencies resulting from chelation by EDTA.

12. ECOLOGICAL INFORMATION (For detailed Ecological data, write or call the address or non-emergency number shown in Section 1).

ENVIRONMENTAL FATE

MOVEMENT & PARTITIONING: Bioconcentration potential is low (BCF less than 100 or Log Pow less than 3). Bioconcentration factor (BCF) in fish is 1.0. Log octanol/water partition coefficient (log Pow) is estimated using the Pomona-MedChem structural fragment method to be -5.005.

DEGRADATION & PERSISTENCE: Material is inherently biodegradable. Reaches more than 20% biodegradation in OECD test(s) for inherent biodegradability. Chemical or physical degradation is expected in the environment. Degradation is expected in the soil environment. Theoretical oxygen demand (ThOD) is calculated to be 1.37 p/p.

ECOTOXICITY: material is slightly toxic to aquatic organisms on an acute basis (LC50 between 10 and 100 mg/L in most sensitive species in very soft water)

Acute LC50 for bluegill (*Lepomis macrochirus*) is 159 mg/L in medium hard water.

Acute LC50 for bluegill (*Lepomis macrochirus*) is 41 mg/L in very soft water.

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ECOTOXICITY: continued

Acute LC50 for bluegill (*Lepomis macrochirus*) is 532 mg/L in very hard water.
Acute LC50 for fathead minnow (*Pimephales promelas*) is 59.8 to greater than 200 mg/L.

13. DISPOSAL CONSIDERATIONS (See Section 15 for Regulatory Information)

DISPOSAL: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. MARTREX, INC. HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 2 (Composition/Information on Ingredients).

FOR UNUSED & UNCONTAMINATED PRODUCT: The preferred options include sending to a licensed, permitted: recycler, reclaimer, incinerator.

14. TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORTATION (DOT): For DOT regulatory information, if required, consult transportation regulations, product shipping papers or contact your Martrex, Inc. representative.

CANADIAN TDG INFORMATION: For TDG regulatory information, if required, consult transportation regulation, product shipping papers, or your Martrex, Inc. representative.

15. REGULATORY INFORMATION (Not meant to be all-inclusive -- selected regulations represented)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state/provincial and local laws. The following specific information is made for the purpose of complying with numerous federal,

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U.S. REGULATIONS

SARA 313 INFORMATION: To the best of our knowledge, this product contains no chemical subject to SARA Title 111 Section 313 supplier notification requirements.

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title 111) and is considered, under applicable definitions, to meet the following categories:

Not to have met any hazard category

TOXIC SUBSTANCES CONTROL ACT (TSCA): All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

STATE RIGHT-TO-KNOW: The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

<u>CHEMICAL NAME</u>	<u>CAS NUMBER</u>	<u>LIST</u>
ETHYLENEDIAMINE TETRAACETIC ACID	000060-00-4	NJ3 PA3 PA1

NJ3 = New Jersey Workplace Hazardous Substance (present at greater than or equal to 1.0%).

PA3 = Pennsylvania Environmental Hazardous Substance (present at greater than or equal to 1.0%).

OSHA HAZARD COMMUNICATION STANDARD: This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

CANADIAN REGULATIONS

WHMIS INFORMATION: The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is:

D2B - eye or skin irritant

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CPR STATEMENT: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

HAZARDOUS PRODUCTS ACT INFORMATION: This product contains the following ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA Section 13 and 14):

<u>COMPONENTS</u>	<u>CAS #</u>	<u>AMOUNT (%w/w)</u>
ETHYLENEDIAMINE TETRAACETIC ACID	000060-00-4	90-95%

16. OTHER INFORMATION

MSDS STATUS: Revised Section 13.

The Information Herein is Given in Good Faith, But No Warranty, Express or Implied, is Made.