

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	(ETHYLENEDINITRILO)TETRAACETIC ACID
Version #	01
Revision date	06-24-2010
CAS #	60-00-4
Product Codes	J.T.Baker: 8991 Mallinckrodt: 2580
Synonym(s)	Edetic acid * VERSENE ACID * EDTA * Ethylenediaminetetraacetic acid
Manufacturer	Mallinckrodt Baker, Inc.
Address	222 Red School Lane Phillipsburg, NJ 08865 US
Customer Service	800-582-2537
24 Hour Emergency	908-859-2151
Chemtrec	800-424-9300

2. Hazards Identification

Emergency overview	WARNING May be harmful if swallowed. Exposure to powder or dusts may be irritating to eyes, nose and throat.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Ingestion. Inhalation. Skin contact. Eye contact.
Eyes	Contact with eyes may cause irritation. Dust or powder may irritate eye tissue.
Inhalation	Inhalation of dusts may cause respiratory irritation.
Ingestion	May cause irritation of the gastrointestinal tract. Do not ingest.
Potential environmental effects	Components of this product are hazardous to aquatic life. May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
(ETHYLENEDINITRILO)TETRAACETIC ACID	60-00-4	90 - 100

4. First Aid Measures

First aid procedures	
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Inhalation	If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.
Ingestion	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting without advice from poison control center. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Rinse mouth thoroughly. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Notes to physician	In case of shortness of breath, give oxygen. Keep victim warm. Symptoms may be delayed.

General advice	In case of shortness of breath, give oxygen. Keep victim warm. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
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5. Fire Fighting Measures

Flammable properties	The product is not flammable. No unusual fire or explosion hazards noted.
Extinguishing media	
Suitable extinguishing media	Water. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Protection of firefighters	
Protective equipment and precautions for firefighters	In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers. Cool containers exposed to flames with water until well after the fire is out.
Specific methods	In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.
Hazardous combustion products	May include oxides of nitrogen.

6. Accidental Release Measures

Personal precautions	Ensure adequate ventilation. Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of dust from the spilled material. Wear a dust mask if dust is generated above exposure limits.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water.
Methods for containment	If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Prevent entry into waterways, sewer, basements or confined areas.
Methods for cleaning up	Should not be released into the environment. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Collect dust using a vacuum cleaner equipped with HEPA filter. Following product recovery, flush area with water.

7. Handling and Storage

Handling	Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Avoid contact with eyes. In case of insufficient ventilation, wear suitable respiratory equipment. Wash thoroughly after handling. Handle and open container with care.
Storage	Store in a well-ventilated place. Keep container tightly closed. Guard against dust accumulation of this material. Use care in handling/storage.

8. Exposure Controls / Personal Protection

Engineering controls	Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. Ensure adequate ventilation, especially in confined areas.
Personal protective equipment	
Eye / face protection	Wear safety glasses with side shields (or goggles). Provide eyewash station and safety shower.
Skin protection	Wear appropriate clothing to prevent repeated or prolonged skin contact.
Respiratory protection	Wear respirator with dust filter.
General hygiene considerations	Do not breathe dust. Avoid contact with eyes.

9. Physical & Chemical Properties

Appearance	Powder. Crystals.
Color	White.
Odor	Odorless.
Odor threshold	Not available.
Physical state	Solid.
Form	Powder.
pH	Not available.

Melting point	464 °F (240 °C)
Freezing point	464 °F (240 °C)
Boiling point	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	< = -0.0001 kPa at 25°C
Vapor density	Not available.
Specific gravity	Not available.
Relative density	Not available.
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Molecular weight	292.28 g/mol
Molecular formula	C10-H16-N2-O8

10. Chemical Stability & Reactivity Information

Chemical stability	Material is stable under normal conditions.
Incompatible materials	Amines. Oxidizing agents.
Hazardous decomposition products	Carbon oxides. Nitrogen oxides (NOx).

11. Toxicological Information

Toxicological data

Product	Test Results
(ETHYLENEDINITRILO)TETRAACETIC ACID (60-00-4)	Acute Oral LD50 Mouse: 30 mg/kg

* Estimates for product may be based on additional component data not shown.

Local effects	Inhalation of dusts may cause respiratory irritation.
Chronic effects	Not available.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Skin corrosion/irritation	Not available.
Epidemiology	Not available.
Neurological effects	Not available.

12. Ecological Information

Ecotoxicological data

Product	Test Results
(ETHYLENEDINITRILO)TETRAACETIC ACID (60-00-4)	EC50 Water flea (Daphnia magna): 113 mg/l 48.00 Hours LC50 Bluegill (Lepomis macrochirus): 34 - 62 mg/l 96.00 Hours

* Estimates for product may be based on additional component data not shown.

Ecotoxicity	Components of this product are hazardous to aquatic life.
Environmental effects	Harmful to aquatic organisms.
Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions	This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.
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14. Transport Information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory Information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.
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CERCLA (Superfund) reportable quantity

(ETHYLENEDINITRILO)TETRAACETIC ACID: 5000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
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Section 311 hazardous chemical	Yes
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Clean Water Act (CWA)	Hazardous substance
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Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.
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US - Pennsylvania RTK - Hazardous Substances: Listed substance

(ETHYLENEDINITRILO)TETRAACETIC ACID (CAS Listed.
60-00-4)

Saf-T-Data

Health: 1 - Slight
Flammability: 1 - Slight
Reactivity: 0 - None
Contact: 1 - Slight
Lab Protective Equip: C - GOGGLES; LAB COAT; PROPER GLOVES
Storage Color Code: G - Green (General Storage)

16. Labeling Info

Label Hazard Warning	WARNING! May be harmful if swallowed. Exposure to powder or dusts may be irritating to eyes, nose and throat.
Label Precautions	Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Keep container closed. Wash thoroughly after handling.
Label First Aid	Immediately flush eyes with plenty of water for at least 15 minutes. Immediately flush skin with plenty of water. If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. Get medical attention if irritation develops or persists. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting without advice from poison control center.

17. Other Information

NFPA ratings	Health: 1 Flammability: 0 Instability: 0
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