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**Material Safety Data Sheet**

From: Mallinckrodt Baker, Inc.
222 Red School Lane
Phillipsburg, NJ 08865

MALLINCKRODT



24 Hour Emergency Telephone: 908-859-2151
CHEMTREC: 1-800-424-9300

National Response in Canada
CANUTEC: 613-996-6666

Outside U.S. and Canada
Chemtrec: 202-483-7616

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers 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 (1-800-582-2537) for assistance.

(ETHYLENEDINITRILO) TETRAACETIC ACID

MSDS Number: E0150 --- *Effective Date: 12/08/96*

1. Product Identification

Synonyms: EDTA; edetic acid; versene acid; ethylenediaminetetraacetic acid.

CAS No.: 60-00-4

Molecular Weight: 292.24

Chemical Formula: (HOCOCH₂)₂NCH₂CH₂N- (HOCOCH₂)₂

Product Codes: J.T. Baker: 8991 Mallinckrodt: 2580, 3770

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
-----	-----	-----	-----
Ethylenediamine Tetraacetic Acid	60-00-4	100%	Yes

3. Hazards Identification

Emergency Overview

CAUTION! MAY BE HARMFUL IF SWALLOWED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

J.T. Baker SAF-T-DATA^(tm) Ratings (Provided here for your convenience)

Health Rating: 1 - Slight
Flammability Rating: 1 - Slight
Reactivity Rating: 0 - None
Contact Rating: 1 - Slight
Lab Protective Equip: GOGGLES; LAB COAT
Storage Color Code: Orange (General Storage)

Potential Health Effects

Inhalation:

Mild irritant. Can cause sore throat and coughing.

Ingestion:

Substance has low toxicity by ingestion. Large amounts may cause gastrointestinal upset due to osmotic imbalance caused by its ability to sequester metal ions.

Skin Contact:

Can cause redness and pain.

Eye Contact:

Can cause redness and pain.

Chronic Exposure:

No information found.

Aggravation of Pre-existing Conditions:

No information found.

4. First Aid Measures

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion:

Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

Skin Contact:

Remove any contaminated clothing. Wash skin with soap or mild detergent and water for at least 15 minutes. Get medical attention if irritation develops or persists.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire Fighting Measures

Fire:

Not considered to be a fire hazard.

Explosion:

Not considered to be an explosion hazard.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

None established.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the

emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

For conditions of use where exposure to the dust or mist is apparent, a half-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear protective gloves and clean body-covering clothing.

Eye Protection:

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

White crystals.

Odor:

Odorless.

Solubility:

0.05 g/100 ml @ 20C (68F)

Density:

ca. 0.9

pH:

No information found.

% Volatiles by volume @ 21C (70F):

0

Boiling Point:

Not applicable.

Melting Point:

240C (464F)

Vapor Density (Air=1):

No information found.

Vapor Pressure (mm Hg):

No information found.

Evaporation Rate (BuAc=1):

No information found.

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Burning may produce carbon monoxide, carbon dioxide, nitrogen oxides.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Oxidizing agents.

Conditions to Avoid:

Incompatibles.

11. Toxicological Information

Investigated as a mutagen, reproductive effector.

-----\Cancer Lists\-----			
Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Ethylenediamine Tetraacetic Acid (60-00-4)	No	No	None

12. Ecological Information

Environmental Fate:

When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material may biodegrade to a moderate extent. When released into the soil, this material is not expected to evaporate significantly. When released into water, this material is not expected to evaporate significantly. This material is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by photolysis.

Environmental Toxicity:

This material is not expected to be toxic to aquatic life. The LC50/96-hour values for fish are over 100 mg/l.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

-----\Chemical Inventory Status - Part 1\-----				
Ingredient	TSCA	EC	Japan	Australia
Ethylenediamine Tetraacetic Acid (60-00-4)	Yes	Yes	Yes	Yes

-----\Chemical Inventory Status - Part 2\-----				
Ingredient	Korea	--Canada-- DSL	NDSL	Phil.
Ethylenediamine Tetraacetic Acid (60-00-4)	Yes	Yes	No	Yes

-----\Federal, State & International Regulations - Part 1\-----				
Ingredient	-SARA 302- RQ	TPQ	-SARA 313- List	Chemical Catg.
Ethylenediamine Tetraacetic Acid (60-00-4)	No	No	No	No

-----\Federal, State & International Regulations - Part 2\-----			
Ingredient	CERCLA	-RCRA- 261.33	-TSCA- 8(d)
Ethylenediamine Tetraacetic Acid (60-00-4)	5000	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
 SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No
 Reactivity: No (Pure / Solid)

Australian Hazchem Code: No information found.

Poison Schedule: No information found.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: 1 Flammability: 0 Reactivity: 0

Label Hazard Warning:

CAUTION! MAY BE HARMFUL IF SWALLOWED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

Label Precautions:

Avoid breathing dust. Use with adequate ventilation. Keep container closed. Wash thoroughly after handling. Avoid contact with eyes, skin and clothing.

Label First Aid:

If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes.

Product Use:

Laboratory Reagent.

Revision Information:

Pure. New 16 section MSDS format, all sections have been revised.

Disclaimer:

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Prepared by: Strategic Services Division

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