



MATERIAL SAFETY DATA SHEET  
Ethylenediamine Tetraacetic Acid

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Ethylenediamine Tetraacetic Acid

**Catalog Numbers:** BPE118-500, D/0450/50, D/0450/53, D/0450/68, D/0452/48, D/0452/50

**Synonyms:** Acetic acid, (ethylenedinitrilo)tetra-; 3,6-Diazaoctanedioic acid, 3,6-bis(carboxymethyl)-; Edetic acid; EDTA; EDTA (chelating agent); EDTA acid; Endrate; N,N'-1,2-EthanediyIbis(N-(carboxymethyl)glycine); Ethylenediaminetetraacetic acid; Ethylenediamine

**Company Identification:** Fisher Scientific UK  
Bishop Meadow Road, Loughborough  
Leics. LE11 5RG

**For information in Europe, call:** (01509) 231166

**Emergency Number, Europe:** 01509 231166

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
60-00-4	Ethylenediamine tetraacetic acid	>99	200-449-4

**Hazard Symbols:** XI



**Risk Phrases:** 36/37/38

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

*Irritating to eyes, respiratory system and skin.*

#### Potential Health Effects

**Eye:** Causes eye irritation. Causes redness and pain.

**Skin:** Causes skin irritation. Causes redness and pain.

**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Ingestion of large amounts can cause hypocalcemic tetany due to formation of calcium complexes. Exposure may cause kidney injury, muscle cramps, bone-marrow depression, and a generalized allergic reaction.

**Inhalation:** Causes irritation of the mucous membrane and upper respiratory tract.

**Chronic:** May cause reproductive and fetal effects. Laboratory experiments have resulted in mutagenic effects. Chronic exposure may cause kidney damage.

### Section 4 - First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes

while removing contaminated clothing and shoes. Wash clothing before reuse.

**Ingestion:** Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:**

### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Dusts at sufficient concentrations can form explosive mixtures with air. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or appropriate foam.

### Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

### Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Keep container tightly closed. Avoid breathing dust.

**Storage:** Do not store in direct sunlight. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

### Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:**

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

**Exposure Limits**

CAS# 60-00-4:

**Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

### Section 9 - Physical and Chemical Properties

**Physical State:** Crystals

**Color:** colorless to white

**Odor:** odorless  
**pH:** Not available  
**Vapor Pressure:** Negligible.  
**Viscosity:** Not available  
**Boiling Point:** Not available  
**Freezing/Melting Point:** 220 deg C ( 428.00°F)  
**Autoignition Temperature:** Not applicable  
**Flash Point:** Not applicable.  
**Explosion Limits: Lower:** Not available  
**Explosion Limits: Upper:** Not available  
**Decomposition Temperature:**  
**Solubility in water:** Slightly soluble  
**Specific Gravity/Density:** 0.86 @ 20C  
**Molecular Formula:** C10H16N2O8  
**Molecular Weight:** 292.25

### Section 10 - Stability and Reactivity

**Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions. Decarboxylates above 150C.

**Conditions to Avoid:** Dust generation, excess heat.

**Incompatibilities with Other Materials** Strong oxidizing agents, strong bases, aluminum, copper, copper alloys, nickel.

**Hazardous Decomposition Products** Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

**Hazardous Polymerization** Will not occur.

### Section 11 - Toxicological Information

**RTECS#:** CAS# 60-00-4: AH4025000

**LD50/LC50:** RTECS:  
**CAS# 60-00-4:** Oral, mouse: LD50 = 30 mg/kg;

**Carcinogenicity:** Ethylenediamine tetraacetic acid - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

**Other:** See actual entry in RTECS for complete information.

### Section 12 - Ecological Information

**Ecotoxicity:** Fish: Channel catfish: LC50 = 129-159 mg/L; 96Hr; Unspecified  
 Fish: Rainbow trout: LC50 = 340 mg/L; 24Hr; Unspecified  
 Fish: Bluegill/Sunfish: LC50 = 129-159 mg/L; 96Hr; Unspecified  
 Fish: Fathead Minnow: 100% Lethal = 750 ppm; 96 Hr; Static bioassay  
 Water flea Daphnia: LC50 > 100 ppm; 96 Hr; Static bioassay

### Section 13 - Disposal Considerations

Products considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local authority or advice. Empty containers must be decontaminated before returning for recycling.

### Section 14 - Transport Information

	<b>IATA</b>	<b>IMO</b>	<b>RID/ADR</b>
<b>Shipping</b>	Not regulated as a	Not regulated as a	Not regulated as a

<b>Name:</b>	hazardous material	hazardous material	hazardous material
<b>Hazard Class:</b>			
<b>UN Number:</b>			
<b>Packing Group:</b>			

USA RQ: CAS# 60-00-4: 5000 lb final RQ; 2270 kg final RQ

**Section 15 - Regulatory Information**

**European/International Regulations**

European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:

R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 37/39 Wear suitable gloves and eye/face protection.

WGK (Water Danger/Protection)

CAS# 60-00-4: 2

Canada

CAS# 60-00-4 is listed on Canada's DSL List

**US Federal**

TSCA

CAS# 60-00-4 is listed on the TSCA Inventory.

**Section 16 - Other Information**

**MSDS Creation Date:** 6/01/1999

**Revision #5 Date** 6/29/2007

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