

SAFETY DATA SHEET

Preparation Date: 8/3/15

Revision Date: 8/3/15

Revision Number: G1

1. IDENTIFICATION

Product identifier

Product code: E3532
Product Name: (ETHYLENEDINITRILO)TETRAACETIC ACID, POWDER

Other means of identification

1. IDENTIFICATION

Synonyms:

EDTA
(Ethylenedinitrilo)tetraacetic acid
3,6-Diazaoctanedioic acid, 3,6-bis(carboxymethyl)-
Acetic acid, 2,2',2'',2'''-(1,2-ethanediyl)dinitrilo)tetrakis-
Acide edetique [INN-French]
Acide ethylenediaminetetracetique [French]
Acido edetico [INN-Spanish]
Acidum edeticum [INN-Latin]
Celon A
Celon ATH
Cheelox
Cheelox BF acid
Chelest 3A
Chemcolox 340
Clewat TAA
Complexon II
Dissolvine E
EDTA
EDTA (chelating agent)
EDTA acid
Edathamil
Edetic acid
Endrate
Ethylenebisiminodiacetic acid
Ethylenediamine-N,N,N',N'-tetraacetic acid
Ethylenediaminetetraacetic acid
Gluma cleanser
Glycine, N,N'-1,2-ethanediylbis(N-(carboxymethyl)-
Hamp-ene acid
Havidote
ICRF 185
Komplexon II
Kyselina ethyleniamintetraoctova [Czech]
Metaquest A
N,N'-1,2-Ethanediylbis(N-(carboxymethyl)glycine)
Nervanid B acid
Nullapon B acid
Nullapon BF acid
Perma kloor 50 acid
Quastal Special
Questex 4H
SEQ 100
Sequestrene AA
Sequestric acid
Sequestrol
Tetrine acid
Titriplex
Titriplex II
Trilon BS
Trilon BW
Universne acid
Versene
Versene acid
Vinkeil 100
Warkeelate acid

CAS #:

60-00-4

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1. IDENTIFICATION

RTECS # AH4025000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2B
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Label elements

Warning

Hazard statements
Causes eye irritation

Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

May be harmful if swallowed

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %	Trade Secret
Ethylenediaminetetraacetic Acid 60-00-4	60-00-4	100	*

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4. FIRST AID MEASURES

First aid measures

General Advice:

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126)

Skin Contact:

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops. Consult a physician if necessary.

Eye Contact:

Flush eye with water for 15 minutes. Get medical attention.

Inhalation:

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion:

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

Symptoms

Causes eye irritation. May be harmful if swallowed.

Indication of any immediate medical attention and special treatment needed

Notes to Physician:

Treat symptomatically

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media:

Dry chemical. Carbon dioxide (CO₂). Water spray mist or foam.

Unsuitable Extinguishing Media:

No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products:

Carbon Monoxide. Carbon Dioxide. Nitrogen Oxides

Specific hazards:

May be combustible at high temperatures
As with most organic solids, fire is possible at elevated temperatures
When heated to decomposition it emits highly toxic of nitrogen oxide.

Special Protective Actions for Firefighters

Specific Methods:

No information available.

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Remove all sources of ignition.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Avoid dust formation. Do not ingest. Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents. Strong bases. Copper. Copper alloys. Nickel.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Ethylenediaminetetraacetic Acid 60-00-4	None	None	None	None

Canada

Components	Alberta	British Columbia	Ontario	Quebec
Ethylenediaminetetraacetic Acid 60-00-4	None	None	None	None

Australia and Mexico

Components	Australia	Mexico
Ethylenediaminetetraacetic Acid 60-00-4	None	None

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Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation, especially in confined areas. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection:	Goggles or Safety glasses with side-shields
Skin and body protection:	Gloves. Chemical resistant apron. Long sleeved clothing.
Respiratory protection:	Effective dust mask. or. Wear respirator with dust filter.
Hygiene measures:	Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid.	Appearance: Crystalline powder.	Color: White.
Odor: Odorless.	Taste No information available	Molecular/Formula weight: 292.25 g/mole
Formula: C10H16N2O8	Flammability: No information available	Flash point (°C): No data available
Flashpoint (°C/°F): No information available.	Flash Point Tested according to: Not available	Autoignition Temperature (°C/°F): No information available
Lower Explosion Limit (%): No information available	Upper Explosion Limit (%): No information available	pH: No information available
Melting point/range(°C/°F): 240°C (464°F)	Boiling point/range(°C/°F): No information available	Decomposition temperature(°C/°F): No information available
Bulk density: No information available	Density (g/cm3): No information available	Specific gravity: No information available
Vapor pressure @ 20°C (kPa): No information available	Evaporation rate: No information available	Vapor density: No information available
VOC content (g/L): No information available	Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): No information available
Viscosity: No information available	Miscibility: No information available	Solubility: Very slightly soluble in cold water Insoluble in organic acids Solubility in water: 0.50 g/L @ 25°C Soluble in solution of alkali hydroxides

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10. STABILITY AND REACTIVITY

Reactivity

Reactive with oxidizing agents, metals, alkalis

Chemical stability

Stability: Stable under recommended storage conditions

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Excess Heat. Incompatible materials. It decarboxylates above 150 deg. C.

Incompatible Materials: Oxidizing agents. Strong bases. Copper. Copper alloys. Nickel.

Hazardous decomposition products: No information available

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Inhalation. Ingestion.

Acute Toxicity

Component Information

Ethylenediaminetetraacetic Acid - 60-00-4

LD50/oral/rat = 1700 mg/kg Oral LD50 Rat (RTECS)
2000-3200 mg/kg (EU Chemicals Bureau IUCLID dataset)

LD50/oral/mouse = 30 mg/kg Oral LD50 Mouse

LD50/dermal/rat = No information available

LD50/dermal/rabbit = No information available

LC50/inhalation/rat = No information available

LC50/inhalation/mouse = No information available

Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =

VALUE- Acute Tox Oral = >2000mg/kg

LD50/oral/mouse =

Value - Acute Tox Oral = 30mg/kg

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat

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VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: May cause skin irritation

Eye Contact: Causes eye irritation. Mild eye irritation.

Inhalation May cause irritation of respiratory tract.
Ingestion May be harmful if swallowed. May cause gastrointestinal tract irritation with nausea, vomiting, diarrhea. May affect behavior/central nervous system (convulsions). May cause hypocalcemic tetany due to formation of calcium complexes. May cause kidney injury, muscle cramps, bone- marrow depression and a generalized allergic reaction. May affect liver . May affect the blood. Ingestion of large amounts may cause systemic toxicity involving blood chemistry du to chelation properties.

Aspiration hazard No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity No information available

Sensitization: No information available

Mutagenic Effects: Mutagenic effects in mammalian somatic cells
Sister Chromatid Exchange (hamster embryo)

Carcinogenic effects: Not considered carcinogenic

Components	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
Ethylenediaminetetraacetic Acid	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

Reproductive toxicity No data is available

Reproductive Effects: No information available

Developmental Effects: No information available

Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available

STOT - repeated exposure No information available

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Target Organs: No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Ethylenediaminetetraacetic Acid - 60-00-4

Freshwater Algae Data: 1.01 mg/L EC50 *Desmodesmus subspicatus* 72 h

Freshwater Fish Species Data: 44.2-76.5 mg/L LC50 *Pimephales promelas* 96 h static 1
34-62 mg/L LC50 *Lepomis macrochirus* 96 h static 1

Water Flea Data: 113 mg/L EC50 *Daphnia magna* 48 h

Persistence and degradability: No information available

Bioaccumulative potential: No information available

Mobility: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Ethylenediaminetetraacetic Acid	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: None
ERG No: No information available
Marine Pollutant: No data available
DOT RQ (lbs): No information available

TDG (Canada)

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available

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14. TRANSPORT INFORMATION

Packing Group: No information available
Description: No information available

ADR

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available
Classification Code: No information available
Description: No information available
CEPIC Tremcard No: No information available

IMO / IMDG

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Description: No information available
IMDG Page: No information available
Marine Pollutant No information available
MFAG: No information available
Maximum Quantity: No information available

RID

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Classification Code: No information available
Description: No information available

ICAO

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Description: No information available

IATA

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Description: No information available

15. REGULATORY INFORMATION

International Inventories

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Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Ethylenediaminetetraacetic Acid	Present	Present KE-13648	Present	Present (2)-1263	Present	Present	Present 200-449-4

U.S. Regulations

Ethylenediaminetetraacetic Acid

- Massachusetts RTK: Present
- New Jersey RTK Hazardous Substance List: 0876
- New Jersey - Discharge Prevention - List of Hazardous Substances: Present
- Pennsylvania RTK: Environmental hazard
- Pennsylvania RTK - Environmental Hazard List Present
- Pennsylvania RTK - Special Hazardous Substances Present
- New York Release Reporting - List of Hazardous Substances:
= 1 lb RQ
= 5000 lb RQ
- Louisiana Reportable Quantity List for Pollutants: Listed
- California Directors List of Hazardous Substances: Present

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Ethylenediaminetetraacetic Acid	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
Ethylenediaminetetraacetic Acid	= 2270 kg final RQ = 5000 lb final RQ	None	None	None	None

U.S. TSCA

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Ethylenediaminetetraacetic Acid	Not Applicable	Not Applicable

Canada

WHMIS hazard class:

D2B Toxic materials

Ethylenediaminetetraacetic Acid

D2B

Canada Controlled Products Regulation:

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

Inventory

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Ethylenediaminetetraacetic Acid

Components	Canada (DSL)	Canada (NDSL)
Ethylenediaminetetraacetic Acid	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Ethylenediaminetetraacetic Acid	Not listed	Not listed

EU Classification**R-phrase(s)**

R36 - Irritating to eyes.

S -phrase(s)

S 2 - Keep out of the reach of children.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Components	Classification	Concentration Limits:	Safety Phrases
Ethylenediaminetetraacetic Acid	Xi; R36	No information	S2 S26

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xi - Irritant.

Xi

**16. OTHER INFORMATION**

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16. OTHER INFORMATION

Preparation Date: 8/3/15
Revision Date: 8/3/15
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet