

SAFETY DATA SHEET

Preparation Date: 3/24/2014

Revision Date: 3/24/2014

Revision Number: G1

1. IDENTIFICATION

Product identifier

Product code: E1039
Product Name: ETHYLENE GLYCOL BIS(2-AMINOETHYL ETHER)-N,N,N,N-TETRAACETIC ACID, HIGH PURITY

Other means of identification

Synonyms: Acetic acid, (ethylenebis(oxyethylenenitrilo))tetra-
1,2-Bis(2-dicarboxymethylaminoethoxy)ethane
6,9-Dioxa-3,12-diazatetradecanedioic acid, 3,12-bis(carboxymethyl)- (9CI)
(Ethylenebis(oxyethylenenitrilo))tetraacetic acid
Ethylenedioxybis(ethyleneamino)tetraacetic acid
Ethylene glycol bis(aminoethyl ether)tetraacetate
Ethylene glycol bis(beta-aminoethyl ether)tetraacetate
Ethylene glycol bis(beta-aminoethyl ether)-N,N'-tetraacetic acid
Ethylene glycol bis(2-aminoethyl ether)tetraacetic acid

CAS #: 67-42-5
RTECS # Not available
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 Chemicals and Laboratory Products, Inc.
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: Regina Wachenheim (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Not classified

Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS-No. | Weight % | Trade Secret |
|---|---------|----------|--------------|
| Ethylene Glycol Bis(2-aminoethyl Ether)- N,N,N',N'-tetraacetic Acid 67-42-5 | 67-42-5 | 100 | * |

4. FIRST AID MEASURES

First aid measures

General Advice:

Poison information centres 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.

Eye Contact:

Flush eye with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

Inhalation:

Move to fresh air. If breathing is difficult, give oxygen. In case of shortness of breath, give oxygen. Obtain 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

May cause eye/skin irritation.

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

Product code: E1039

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BIS(2-AMINOETHYL ETHER)-N,N,N,N-
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5. FIRE-FIGHTING MEASURES

| | |
|---|---|
| Suitable Extinguishing Media: | Carbon dioxide (CO ₂). Dry chemical. Water spray mist or foam. |
| Unsuitable Extinguishing Media: | No information available. |
| <u>Specific hazards arising from the chemical</u> | |
| Hazardous Combustion Products: | Carbon monoxide, Carbon dioxide, Nitrogen oxides |
| Specific hazards: | May be combustible at high temperatures. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. |
| <u>Special Protective Actions for Firefighters</u> | |
| 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.

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. All equipment used when handling the product must be grounded. 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:
Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

U.S Occupational Exposure Limits: Not determined

United States

| Components | OSHA | NIOSH | ACGIH | AIHA WHEEL |
|--|------|-------|-------|------------|
| Ethylene Glycol Bis(2-aminoethyl Ether)-N,N,N',N'-tetraacetic Acid - 67-42-5 | None | None | None | None |

Canada

Canada Occupational Exposure Limits: Not determined

| Components | Alberta | British Columbia | Ontario | Quebec |
|--|---------|------------------|---------|--------|
| Ethylene Glycol Bis(2-aminoethyl Ether)-N,N,N',N'-tetraacetic Acid - 67-42-5 | None | None | None | None |

Australia and Mexico

Occupational Exposure Limits for Australia and Mexico: Not determined

| Components | Australia | Mexico |
|--|-----------|--------|
| Ethylene Glycol Bis(2-aminoethyl Ether)-N,N,N',N'-tetraacetic Acid - 67-42-5 | None | None |

Appropriate engineering controls

Engineering measures to reduce exposure:

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

9. PHYSICAL AND CHEMICAL PROPERTIES

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|--|---|---|
| Physical state: Solid. | Appearance: Powder. Crystalline powder. | Color: White. |
| Odor: Odorless. | Taste No information available | Formula: C14-H24-N2-O10 |
| Molecular/Formula weight: 380.35 | Flash point (°C): Not applicable | Flashpoint (°C/°F): Not applicable |
| Flash Point Tested according to: Not applicable | Lower Explosion Limit (%): No information available | Upper Explosion Limit (%): No information available |
| Autoignition Temperature (°C/°F): No information available | pH: No information available | Melting point/range(°C/°F): 240-241°C/464-466 °F |
| Boiling point/range(°C/°F): No information available | Decomposition temperature(°C/°F): No information available | Specific gravity: No information available |
| Density (g/cm3): No information available | Bulk density: 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: No information available | |

10. STABILITY AND REACTIVITY

Reactivity

Reactive with oxidizing agents

Chemical stability

Stability: Stable at normal conditions

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Avoid dust formation. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Incompatible materials.

Incompatible Materials: Strong oxidizing agents.

Hazardous decomposition products: Carbon dioxide. Carbon monoxide. Nitrogen oxides (NOx).

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

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11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Ingestion. Inhalation.

Acute Toxicity

Component Information

Ethylene Glycol Bis(2-aminoethyl Ether)-N,N,N',N'-tetraacetic Acid - 67-42-5

LD50/oral/rat = 3587 mg/kg

LD50/oral/mouse = No information available

LD50/dermal/rabbit = No information available

LD50/dermal/rat = 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 = 3587mg/kg

LD50/oral/mouse =

Value - Acute Tox Oral = No information available

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat

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: May cause eye irritation.

Inhalation May cause irritation of respiratory tract.

Ingestion Saline cathartics (laxatives) are poorly absorbed from the gastrointestinal tract; hence, systemic toxicity is unlikely unless massive amounts have been ingested. Ingestion of large amounts may cause gastrointestinal (digestive) tract irritation with abdominal pain, nausea, vomiting, diarrhea. Low hazard for usual industrial handling.

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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: No information available

Carcinogenic effects: Not considered carcinogenic

| Components | ACGIH - Carcinogens | IARC | NTP | OSHA HCS - Carcinogens | Australia - Prohibited Carcinogenic Substances | Australia - Notifiable Carcinogenic Substances |
|--|---------------------|------------|------------|------------------------|--|--|
| Ethylene Glycol Bis(2-aminoethyl Ether)-N,N,N',N'-tetraacetic 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

Target Organs: No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

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

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| Components | RCRA - F Series Wastes | RCRA - K Series Wastes | RCRA - P Series Wastes | RCRA - U Series Wastes |
|--|------------------------|------------------------|------------------------|------------------------|
| Ethylene Glycol Bis(2-aminoethyl Ether)-N,N,N',N'-tetraacetic 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: Not applicable
Packing Group: None
Marine Pollutant: No data available
ERG No: No information 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
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
CEFIC 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

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14. TRANSPORT INFORMATION

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

| Components | U.S. TSCA | KOREA KECL | Philippines (PICCS) | Japan ENCS | CHINA | Australia (AICS) | EINECS-No. |
|---|-----------|-------------|---------------------|-------------|---------|------------------|-------------------|
| <i>Ethylene Glycol Bis(2-aminoethyl Ether)-N,N,N',N'-tetraacetic Acid</i> | Present | Not present | Present | Not present | Present | Present | Present 200-651-2 |

U.S. Regulations

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: |
|---|------------|------------------------|----------------------------|-------------------------------|
| <i>Ethylene Glycol Bis(2-aminoethyl Ether)-N,N,N',N'-tetraacetic Acid</i> | 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> |
|---|---|---|--|---------------------------------|---|
| <i>Ethylene Glycol Bis(2-aminoethyl Ether)-N,N,N',N'-tetraacetic Acid</i> | None | 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 |
|---|---|--|
| <i>Ethylene Glycol Bis(2-aminoethyl Ether)-N,N,N',N'-tetraacetic Acid</i> | Not Applicable | Not Applicable |

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Canada

WHMIS hazard class:

Non-controlled

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

| Components | Canada (DSL) | Canada (NDSL) |
|--|--------------|---------------|
| Ethylene Glycol Bis(2-aminoethyl Ether)-N,N,N',N'-tetraacetic Acid | Present | Not Listed |

| Components | CEPA Schedule I - Toxic Substances | CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting |
|--|------------------------------------|---|
| Ethylene Glycol Bis(2-aminoethyl Ether)-N,N,N',N'-tetraacetic Acid | Not listed | Not listed |

EU Classification

R-phrase(s)

none

S -phrase(s)

none

| Components | Classification | Concentration Limits: | Safety Phrases |
|--|----------------|-----------------------|----------------|
| Ethylene Glycol Bis(2-aminoethyl Ether)-N,N,N',N'-tetraacetic Acid | | No information | |

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

Indication of danger:

Not dangerous

16. OTHER INFORMATION

Product code: E1039

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BIS(2-AMINOETHYL ETHER)-N,N,N,N-
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16. OTHER INFORMATION

| | | |
|------|------|-------------------------------|
| NFPA | HMIS | Personal Protective Equipment |
|------|------|-------------------------------|



| | |
|---------------|---|
| Health Hazard | 1 |
| Fire Hazard | 1 |
| Reactivity | 0 |



See Section 8.

Preparation Date: 3/24/2014
Revision Date: 3/24/2014
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 Material Safety Data Sheet