SAFETY DATA SHEET

Preparation Date: 8/22/2016
Revision Date: 8/22/2016
Revision Number: G1

1. IDENTIFICATION

Product identifier

Product code: E1232
Product Name: EDETATE CALCIUM DISODIUM, HYDRATE, USP

Other means of identification

Synonyms:
Calcium Disodium Edetate, dihydate
Calcium Disodium Ethylenediaminetetraacetate, dihydrate
Calcium Disodium(Ethylenenitrilo)tetraacetate, dihydrate
Ethylenediaminetetraacetic Acid, Calcium Disodium Salt, dihydrate
Calcium Disodium EDTA dihydrate
Edetate Calcium Disodium dihydrate

CAS #: 23411-34-9
RTECS #: EV7700000
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 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

Product code: E1232  Product name: EDETATE CALCIUM DISODIUM, HYDRATE, USP
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edetate Calcium Disodium Salt, dihydrate</td>
<td>23411-34-9</td>
<td>100</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

First aid measures

General Advice: National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

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

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

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: May cause eye/skin irritation. May cause digestive (gastrointestinal) tract irritation. Ingestion may cause nausea, vomiting, and diarrhea. May cause anorexia. Thirst. May cause headache. Fatigue. Fever. It may affect the kidneys. May affect the liver. May affect the bone marrow. It may affect the blood. Anemia. Hypotension.

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 powder. Carbon dioxide (CO2). Water spray mist or foam.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products: Carbon Dioxide, Carbon Monoxide. Sodium Oxides. Calcium oxides.

Specific hazards: No information available.

Product code: E1232  Product name: EDETAETE CALCIUM DISODIUM, HYDRATE, USP
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. Avoid breathing dust. 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 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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

<table>
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<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>OSHA</th>
<th>NIOSH</th>
<th>ACGIH</th>
<th>AIHA WHEEL</th>
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Product code: E1232  Product name: EDETATE CALCIUM DISODIUM, HYDRATE, USP
Canada

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Canada - Alberta</th>
<th>Canada - British Columbia</th>
<th>Canada - Ontario</th>
<th>Canada - Quebec</th>
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<tr>
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Australia and Mexico

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<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Australia</th>
<th>Mexico</th>
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</thead>
<tbody>
<tr>
<td>Edetate Calcium Disodium Salt, dihydrate</td>
<td>23411-34-9</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

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. Long sleeved clothing. Chemical resistant apron.
Respiratory protection: Effective dust mask. or. Wear respirator with dust filter. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds), inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.
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

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<thead>
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<tr>
<td>Molecular/Formula weight: 410.3 g/mole</td>
<td>Flammability: No information available</td>
<td>Flashpoint (°C/°F): No information available.</td>
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<td>Flash Point Tested according to: Not available</td>
<td>Autoignition Temperature (°C/°F): No information available</td>
<td>Lower Explosion Limit (%): No information available</td>
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<tr>
<td>Upper Explosion Limit (%): No information available</td>
<td>Melting point/range(°C/°F): No information available</td>
<td>Decomposition temperature(°C/°F): No information available</td>
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<td>Boiling point/range(°C/°F):</td>
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</table>

Product code: E1232 Product name: EDETATE CALCIUM DISODIUM, HYDRATE, USP
10. STABILITY AND REACTIVITY

Reactivity
Reactive with oxidizing agents

Chemical stability
Stability: Stable under recommended storage conditions.
Possibility of Hazardous Reactions: Hazardous polymerization does not occur
Incompatible Materials: Oxidizing agents

Other Information
Corrosivity: Non-corrosive in presence of glass.
Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Principal Routes of Exposure: Ingestion. Inhalation.

Acute Toxicity

Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50/oral/rat</th>
<th>LD50/oral/mouse</th>
<th>LD50/dermal/rabbit</th>
<th>LD50/dermal/rat</th>
<th>LC50/inhalation/rat</th>
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<tr>
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<td>No information available</td>
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Product code: E1232  Product name: EDETATE CALCIUM DISODIUM, HYDRATE, USP
Product Information

LD50/oral/rat = VALUE- Acute Tox Oral = No information available
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 slight temporary eye irritation.
Inhalation May cause irritation of respiratory tract.
Ingestion May cause digestive (gastrointestinal) tract irritation. Ingestion may cause nausea, vomiting, diarrhea. May cause thirst. May cause anorexia. May cause fatigue. May cause headache. May affect urinary system (kidneys). May affect liver. May affect the blood (anemia). It may affect the bone marrow (bone marrow depression). May affect the cardiovascular system (hypotension).

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.

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>IARC</th>
<th>ACGIH - Carcinogens</th>
<th>NTP</th>
<th>OSHA HCS - Carcinogens</th>
<th>Australia - Notifiable Carcinogenic Substances</th>
<th>Australia - Prohibited Carcinogenic Substances</th>
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<td>Not listed</td>
<td>Not listed</td>
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<td>Not listed</td>
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Product code: E1232  Product name: EDETATE CALCIUM DISODIUM, HYDRATE, USP
Reproductive toxicity: No data is available
Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: 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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<td>None</td>
<td>None</td>
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</table>

14. TRANSPORT INFORMATION

DOT
UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Class: No information available
Packing group: No information available

Product code: E1232  Product name: EDETA TE CALCI UM DISODIUM, HYDRATE, USP
<table>
<thead>
<tr>
<th><strong>Emergency Response Guide</strong></th>
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<tr>
<td><strong>Number</strong></td>
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<tr>
<td><strong>Marine Pollutant</strong></td>
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<tr>
<td><strong>DOT RQ (lbs):</strong></td>
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<tr>
<td><strong>Special Provisions</strong></td>
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<tr>
<td><strong>Symbol(s):</strong></td>
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</tr>
<tr>
<td><strong>Description:</strong></td>
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</table>

**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 |
| **Marine Pollutant**        | No Information available |
| **Description:**            | No information available |

**ADR**

| **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 |

**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 |

**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 |

**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 |

**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 |

**ERG Code:**

| **Special Provisions**      | No information available |

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**15. REGULATORY INFORMATION**

**International Inventories**

**Product code:** E1232  **Product name:** EDETADE CALCIUM DISODIUM, HYDRATE, USP
Components |CAS-No. |U.S. TSCA |KOREA KECL |Philippines (PICCS) |Japan ENCS |CHINA |Australia (AICS) |EINECS-No.
--- |--- |--- |--- |--- |--- |--- |--- |---
Edetate Calcium Disodium Salt, dihydrate |23411-34-9 |Not Listed |Not present |Present |Not present |Not present |Not present |Not present

U.S. Regulations


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 |CAS-No. |Carcinogen |Developmental Toxicity Male Reproductive Toxicity Female Reproductive Toxicity
--- |--- |--- |--- |--- |---
Edetate Calcium Disodium Salt, dihydrate |23411-34-9 |Not Listed |Not Listed |Not Listed |Not Listed

CERCLA/SARA

Components |CAS-No. |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 de minimis
--- |--- |--- |--- |--- |--- |---
Edetate Calcium Disodium Salt, dihydrate |23411-34-9 |None |None |None |None |None

U.S. TSCA

Components |CAS-No. |TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS) |TSCA 8(d) - Health and Safety Reporting
--- |--- |--- |---
Edetate Calcium Disodium Salt, dihydrate |23411-34-9 |Not Applicable |Not Applicable

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 |CAS-No. |Canada (DSL) |Canada (NDSL)
--- |--- |--- |---
Edetate Calcium Disodium Salt, dihydrate |23411-34-9 |Not Listed |Not Listed

Components |CAS-No. |CEPA Schedule I - Toxic Substances
--- |--- |---
Edetate Calcium Disodium Salt, dihydrate |23411-34-9 |Not listed

Components |CAS-No. |CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
--- |--- |---
Edetate Calcium Disodium Salt, dihydrate |23411-34-9 |Not listed

Product code: E1232
Product name: EDETATE CALCIUM DISODIUM, HYDRATE, USP
EU Classification
R-phrase(s)
not determined (not applicable)

S-phrase(s)
none

<table>
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<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration Limits:</th>
<th>Safety Phrases</th>
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<tbody>
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<td>Edetate Calcium Disodium Salt, dihydrate</td>
<td>23411-34-9</td>
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</table>

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

Indication of danger:
None.

16. OTHER INFORMATION

Preparation Date: 8/22/2016
Revision Date: 8/22/2016
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