Section 1 - Product and Company Information

Product Name: Ethylenediaminetetraacetic acid tetrasodium salt dihydrate, minimum 99% titration
Product Number: ED459
Brand: Sigma Chemical
Company: Sigma-Aldrich
Address: 3335 Spruce Street
City, State, Zip, Country: SANT LOUIS, MO 63103 US
Technical Phone: 800-325-5832
Fax: 800-325-5332
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS #</th>
<th>SARA 313</th>
<th>EC no</th>
<th>Annex</th>
<th>Index Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYLENEDIAMINETETRAACETIC ACID TETRASODIUM SALT DIHYDRATE</td>
<td>10378-23-1</td>
<td>No</td>
<td>200-573-9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Formula: C10H12N2Na4O8·2H2O
Synonyms:

Section 3 - Hazards Identification

Emergency Overview: Instant irritating to eyes, respiratory system and skin.

HMIS Rating:
Health: 2
Flammability: 0
Reactivity: 0

NFPA Rating:
Health: 2
Flammability: 0
Reactivity: 0
For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure: If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure: If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure: In case of contact, immediately wash skin with soap and copious amounts of water.

Eye Exposure: In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Section 5 - Fire Fighting Measures

Autoignition Temp: N/A
Extinguishing Media:
Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting:
Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s): Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up: Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling:
User Exposure: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage:
Suitable: Keep tightly closed.

Section 8 - Exposure Controls / PPE

Engineering Controls: Safety shower and eye bath. Mechanical exhaust required.

Personal Protective Equipment:
Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.
Hand: Compatible chemical-resistant gloves.
Eye: Chemical safety goggles.

Sigma Chemical - ED459
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Sigma-Aldrich Corporation
www.sigma-aldrich.com


## Section 9 - Physical/Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>416.20 AMU</td>
</tr>
<tr>
<td>pH</td>
<td>NA</td>
</tr>
<tr>
<td>BP/SP Range</td>
<td>NA</td>
</tr>
<tr>
<td>M/P/MP Range</td>
<td>NA</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>NA</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>NA</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>NA</td>
</tr>
<tr>
<td>Saturated Vapor Conc.</td>
<td>NA</td>
</tr>
<tr>
<td>SG/Density</td>
<td>NA</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>NA</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>NA</td>
</tr>
<tr>
<td>Volatile%</td>
<td>NA</td>
</tr>
<tr>
<td>VOC Content</td>
<td>NA</td>
</tr>
<tr>
<td>Water Content</td>
<td>5 - 10 %</td>
</tr>
<tr>
<td>Solvent Content</td>
<td>NA</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>NA</td>
</tr>
<tr>
<td>Viscosity</td>
<td>NA</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>NA</td>
</tr>
<tr>
<td>Decomposition Temp.</td>
<td>NA</td>
</tr>
<tr>
<td>Flash Point °F</td>
<td>NA</td>
</tr>
<tr>
<td>Flash Point °C</td>
<td>NA</td>
</tr>
<tr>
<td>Explosion Limits</td>
<td>NA</td>
</tr>
<tr>
<td>Flammability</td>
<td>NA</td>
</tr>
<tr>
<td>Autoignition Temp</td>
<td>NA</td>
</tr>
<tr>
<td>Solubility</td>
<td>Solvent: 0.1 g/ml H2O Clear</td>
</tr>
</tbody>
</table>

N/A = not available

## Section 10 - Stability and Reactivity

- **Stability**
  - Stable
  - Stable
- **Materials to Avoid**
  - Strong oxidizing agents, strong acids
- **Hazardous Decomposition Products**
  - Hazardous Decomposition Products
    - Carbon monoxide, carbon dioxide, nitrogen oxides

## Section 11 - Toxicological Information

### Route of Exposure
- **Skin Contact**
  - Causes skin irritation.
- **Eye Contact**
  - Causes eye irritation.
- **Inhalation**
  - Material is irritating to mucous membranes and upper respiratory tract.
  - May be harmful if inhaled.
- **Ingestion**
  - May be harmful if swallowed.

### Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**RTECS Number:** N/A

## Section 12 - Ecological Information
No data available.

## Section 13 - Disposal Considerations

**Appropriate Method of Disposal of Substance or Preparation**
Contact a licensed professional waste disposal service to dispose of this material.

**Safe Handling**
- Dispose of the material in a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
- Observe all federal, state, and local environmental regulations.

## Section 14 - Transport Information

- **DOT**
  - Proper Shipping Name: None
- **Non-Hazardous for Transport**
  - This substance is considered to be nonhazardous for transport.

- **IATA**
  - Non-Hazardous for Air Transport

## Section 15 - Regulatory Information

- **EU Additional Classification**
  - **Symbol of Danger:** Xi
  - **Indication of Danger**
  - Irritant.
  - **Risk Statements**
  - R: 36/37/38
  - Irritating to eyes, respiratory system, and skin.
- **Safety Statements**
  - S: 26 36/37
  - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing and gloves.

- **US Classification and Label Text**
  - **Indication of Danger**
  - Irritant.
  - **Risk Statements**
  - Irritating to eyes, respiratory system, and skin.
Safety Statements
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing and gloves.

United States Regulatory Information
SARA Listed: No

Canada Regulatory Information
WHMIS Classification
This product has been classified in accordance with the hazard criteria of the OPR, and the MSDS contains all the information required by the OPR.
DR: No
NDRL: No

Section 16 - Other Information

Disclaimer
For R&D use only. Not for drug, household or other uses.

Warranty
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present status of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or form contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2023 Sigma Aldrich Co. License granted to make unlimited paper copies for internal use only.