Section 1 - Product and Company Information

Product Name: Sodium carbonate decahydrate, 99.99% metate basis
Product Number: 577782
Brand: Aldrich Chemical
Company: Sigma-Aldrich
Street Address: 3000 Spruce Street
City, State, Zip, Country: SAINT LOUIS, MO 63103 US
Technical Phone: 800-325-4930
Emergency Phone: 314-778-6555
Fax: 800-325-5052

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 I Index Number</th>
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<td>SODIUM CARBONATE DECAHYDRATE</td>
<td>6132-02-1</td>
<td>No</td>
<td>207-835-8</td>
<td>011-035-00-2</td>
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<td>Formula</td>
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<td>Synonym</td>
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</table>

Section 3 - Hazards Identification

Emergency Overview
 Irritant.

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: Noncombustible. Use extinguishing media appropriate to surrounding fire conditions.

Specific Hazard(s)
 Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s)
 Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

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
 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.

Section 9 - Physical/Chemical Properties

Appearance
 Physical State: Solid
 Color: Colorless
 Form: Crystalline

Aldrich Chemical - 577782
 Sigma-Aldrich Corporation
 www.sigma-aldrich.com
Molecular Weight: 285.96 AMU

pH: 12.0

BP/BP Range: N/A

MP/MP Range: N/A

Freezing Point: N/A

Vapor Pressure: N/A

Vapor Density: N/A

Saturated Vapor Conc.: N/A

SG/Density: 1.14 g/cm³ at 20 °C

Bulk Density: 7 - 9 kg/m³

Odor Threshold: N/A

VOCs: N/A

Water Content: N/A

Solvent Content: N/A

Evaporation Rate: N/A

Viscosity: N/A

Partition Coefficient: N/A

Decomposition Temp.: N/A

Flash Point: 76 °C

Ignition Point: N/A

Explosion Limits: N/A

Flammability: N/A

Autoignition Temp.: N/A

Solubility: N/A

Solubility in Water: 0.5 M in H2O, 20°C, colorless

N/A = not available

Section 10 - Stability and Reactivity

Stability:
- Conditions of Instability
  - Moisture
- Conditions to Avoid
  - Moisture
- Materials to Avoid
  - Strong acids, Aluminum

Hazardous Decomposition Products:
- Carbon monoxide, Carbon dioxide

Hazardous Polymerization:
- Will not occur

Section 11 - Toxicological Information

Route of Exposure:
- Skin Contact
  - May cause skin irritation
- Skin Absorption
  - May be harmful if absorbed through the skin
- Eye Contact
  - Causes eye irritation
- Inhalation
  - May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract

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.
  - Dissolve or mix the material with 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 non-hazardous for transport.

- IATA
  - Non-Hazardous for Air Transport
  - Non-hazardous for air transport

Section 15 - Regulatory Information:

- EU Directive Classification
  - Symbol of Danger: Xi
  - Indication of Danger
    - Irritant
  - Risk Statements
    - R: 36
    - Irritating to eyes
    - Safety Statements
      - S53: Keep out of reach of children
      - S29: Do not breathe dust
      - S812: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

- US Classification and Label Text
  - Indication of Danger
    - Irritant
  - Risk Statements
    - Irritating to eyes
  - Safety Statements
    - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

- Wear suitable protective clothing.

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.
  - DSL: No
  - NDSL: No

- Airline Chemical - 577782
- Sigma-Aldrich Corporation
  - www.sigmaaldrich.com
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 state 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 from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.