1. Identification

1.1. Product identifier
Product Identity: Soda Ash
Alternate Names: Sodium Carbonate

1.2. Relevant identified uses of the substance or mixture and uses advised against
Intended use: Glass, chemical manufacturing, pulp and paper, water treatment and pH control, soap and detergent manufacturing, coal treatment, emission control, iron exchange resin regeneration.
Application Method: See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet
Company Name: NorthStar Fluids Solutions
P.O. Box 271036
Louisville, Colorado 80027, USA

Emergency CHEMTREC (USA): (800) 424-9300
24 hour Emergency Telephone No.: International +1-703-527-3887
Customer Service: NorthStar Fluid Solutions: (303) 495-3130

2. Hazard(s) identification

2.1. Classification of the substance or mixture
HCS2012(29CFR1910.1200)
Eye irritation, Category 2A
H319: Causes serious eye irritation.

2.2. Label elements
HCS2012(29CFR1910.1200)
Safety Data Sheet
Soda Ash

SDS Revision Date: 02/22/2017

-Warning

Hazard Statements
-H319 Causes serious eye irritation

[Prevention]:
-P264 Wash face, hands and any exposed skin thoroughly after handling
-P280 Wear protective gloves/protective clothing/eye protection/face protection

[Response]:
-P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
-P337 + P313 If eye irritation persists: Get medical advice/attention.

[Storage]:
N/A

[Disposal]:
N/A

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient/Chemical Designations</th>
<th>Weight %</th>
<th>CAS Number</th>
<th>GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbonic acid sodium salt (1:2)</td>
<td>&gt;= 99</td>
<td>497-19-8</td>
<td>Eye Irrit. 2 (H319)</td>
</tr>
</tbody>
</table>

In accordance with paragraph (i) of §1910.1200, the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

[1] Substance classified with a health or environmental hazard.
*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

Inhalation Move to fresh air. If symptoms persist, call a physician.
Eyes Remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, consult a specialist.
Skin Wash off with soap and water. If symptoms persist, call a physician.
**5. Fire-fighting measures**

5.1. Extinguishing media  
Water fog, carbon dioxide, foam, dry chemical.

5.2. Special hazards arising from the substance or mixture  
Decomposition in fire may produce toxic gases.

5.3. Advice for fire-fighters  
Firefighters should wear full protective clothing and self-contained breathing apparatus.

**6. Accidental release measures**

6.1. Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel  
-Avoid dust formation.

Advice for emergency responders  
-Sweep up to prevent slipping hazard.

6.2. Environmental precautions  
-Prevent from entering sewers, waterways, or low areas.  
-Do not flush into surface water or sanitary sewer system  
-Prevent any mixture with an acid into the sewer/drain (gas formations).  
-Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and material for containment and cleaning up  
-Sweep up and shovel into suitable containers for disposal.  
-Keep in properly labeled containers.  
-Keep in suitable, closed containers for disposal.
7. Handling and storage

7.1. Precautions for safe handling
Avoid contact with eyes, skin, or clothing. Avoid creating or inhaling dust. Ensure adequate ventilation. Wash hands after use. Launder contaminated clothing before reuse. Use appropriate protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions
Store away from acids. Store in a cool, dry location. Product has a shelf life of 36 months.

Packaging material
Suitable Material
- Polyethylene
- Woven plastic material.

Unsuitable Material
- Material moisture permeable

7.3. Specific end use(s)
- Contact your supplier for additional information
- This grade of the product is not intended for pharmaceutical, feed or food applications.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>OSHA PEL-TWA</th>
<th>ACGIH TLV-TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium carbonate</td>
<td>497-19-8</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Engineering Controls
Use in a well ventilated area. Localized ventilation should be used to control dust levels.

Personal Protective Equipment
If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory
If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional.

Eyes
Dust proof goggles.

Skin
Coveralls

Other Work Practices
Wear suitable gloves (neoprene or natural rubber).
9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Powder</td>
</tr>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>11.2 (4 g/l) (77 °F (25 °C))</td>
</tr>
<tr>
<td></td>
<td>11.3 (10 g/l) (77 °F (25 °C))</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>1564 °F (851 °C)</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate (Ether = 1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure (Pa)</td>
<td>Negligible</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>71 g/l (32 °F (0 °C))</td>
</tr>
<tr>
<td></td>
<td>212.5 g/l (68 °F (20 °C))</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water (Log Kow)</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity (cSt)</td>
<td>No data available</td>
</tr>
<tr>
<td>Density (lbs/gal)</td>
<td>0.97 – 1.10 kg/dm3</td>
</tr>
<tr>
<td>Method: Free flow</td>
<td></td>
</tr>
</tbody>
</table>

9.2. Other information

Molecular weight

106 g/mol

10. Stability and reactivity

10.1. Reactivity

Not expected to be reactive. Decomposes by reaction with strong acids.

10.2. Chemical stability

Stable under recommended storage conditions

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Exposure to moisture.

10.5. Incompatible materials
Finely divided aluminum.
Strong acids.

10.6. Hazardous decomposition products
Carbon monoxide and carbon dioxide.

11. Toxicological information

11.1 Information on likely routes of exposure
Principle Route of Exposure: Eye or skin contact, inhalation.

11.2 Symptoms related to the physical, chemical and toxicological characteristics

Acute Toxicity
- **Inhalation**: May cause respiratory irritation
- **Eye Contact**: Causes eye irritation.
- **Skin Contact**: Prolonged or repeated contact may cause skin irritation.
- **Ingestion**: Irritation of the mouth, throat, and stomach.

Chronic toxicity: No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

11.3 Toxicity data

**Toxicology data for the components**

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium carbonate</td>
<td>497-19-8</td>
<td>4090 mg/kg (Rat)</td>
<td>2210 mg/kg (Mouse)</td>
<td>2.3 mg/L (Rat) 2h</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2800 mg/kg (Rat)</td>
<td>&gt; 2000 mg/kg (Rabbit)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>Skin corrosion/irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium carbonate</td>
<td>497-19-8</td>
<td>Non-irritating to the skin</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>Eye damage/irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium carbonate</td>
<td>497-19-8</td>
<td>Irritating to eyes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>Skin Sensitization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium carbonate</td>
<td>497-19-8</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>Respiratory Sensitization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium carbonate</td>
<td>497-19-8</td>
<td>No information available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>Mutagenic Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium carbonate</td>
<td>497-19-8</td>
<td>In vivo tests did not show mutagenic effects.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>Carcinogenic Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium carbonate</td>
<td>497-19-8</td>
<td>No information available.</td>
</tr>
</tbody>
</table>
### 12. Ecological information

#### 12.1. Toxicity

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>Toxicity to Algae</th>
<th>Toxicity to Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Toxicity to Invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium carbonate</td>
<td>497-19-8</td>
<td>EC50 242 mg/L (Nitzschia)</td>
<td>TLM24 385 mg/L (Lepomis macrochirus)</td>
<td>LC50 310-1220 mg/L (Pimephales promelas)</td>
<td>LC50 (96h) 300 mg/L (Lepomis macrochirus)</td>
</tr>
</tbody>
</table>

#### 12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>Persistence and Degradability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium carbonate</td>
<td>497-19-8</td>
<td>The methods for determining biodegradability are not applicable to</td>
</tr>
</tbody>
</table>

#### 12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Substances</th>
<th>CAS Number</th>
<th>Log Pow</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium carbonate</td>
<td>497-19-8</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>

#### 12.4. Mobility in soil

No data available.

#### 12.5. Results of PBT and vPvB assessment

Not Applicable, inorganic substance

#### 12.6. Other adverse effects

No data available.
13. Disposal considerations

13.1. Waste treatment methods
Disposal of wastes  
Bury in a licensed landfill according to federal, state, and local regulations.

Contaminated packaging  
Follow all applicable national or local regulations.

14. Transport information

<table>
<thead>
<tr>
<th>14.1. UN number</th>
<th>DOT (Domestic Surface Transportation)</th>
<th>IMO / IMDG (Ocean Transportation)</th>
<th>ICAO/IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.2. UN proper shipping name</td>
<td>Not restricted</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>DOT Hazard Class: Not applicable</td>
<td>IMDG: Not applicable</td>
<td>Air Class: Not applicable</td>
</tr>
<tr>
<td>14.4. Packing group</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14.5. Environmental hazards
IMDG  
Not applicable

14.6. Special precautions for user
Not applicable

15. Regulatory information

US Regulations  
All components listed on inventory or are exempt.

US TSCA Inventory  
Not applicable

EPA SARA Title III Extremely Hazardous Substances  
Not applicable

EPA SARA (311,312) Hazard Class  
Acute Health Hazard

EPA SARA (313) Chemicals  
This product does not contain a toxic chemical for routine annual “Toxic Chemical Release Reporting” under Section 313 (40 CFR 372).

EPA CERCLA/Superfund Reportable Spill Quantity  
Not applicable.
EPA RCRA Hazardous Waste  If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

California Proposition 65  All components listed do not apply to the California Proposition 65 Regulation.

MA Right-to-Know Law  Does not apply.

NJ Right-to-Know Law  Does not apply.

PA Right-to-Know Law  Does not apply.

Canadian Regulations
Canadian DSL Inventory  All components listed on inventory or are exempt.

16. Other information

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

The information and data herein are believed to be accurate and have been compiled from sources believed to be reliable. It is offered for your consideration, investigation and verification. Buyer assumes all risk of use, storage and handling of the product in compliance with applicable Federal, State and local law and regulations. NorthStar Fluid Solutions makes no warranty of any kind, express or implied, concerning the accuracy of completeness of the information and data herein. The implied warranties of merchantability and fitness for a particular purpose are specifically excluded. NorthStar Fluid Solutions will not be liable for claims relating to any use of this product.

Emergency Overview:
Risk Classification System:

<table>
<thead>
<tr>
<th>Category</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH</td>
<td>2</td>
</tr>
<tr>
<td>FLAMMABILITY</td>
<td>0</td>
</tr>
<tr>
<td>PHYSICAL</td>
<td>0</td>
</tr>
<tr>
<td>PPE</td>
<td>E</td>
</tr>
</tbody>
</table>

End of Document