SAFETY DATA SHEET
Sodium Carbonate, Anhydrous

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name: Sodium Carbonate, Anhydrous

Other means of identification

Product Code(s): 497-19-8
Synonyms: Sodium carbonate; Carbonic acid, disodium salt; Disodium carbonate
Chemical Family: Alkali salt

Recommended use of the chemical and restrictions on use

Recommended Use: Glass manufacture, Personal care, Detergent, Water treatment chemical, Chemical processing
Restrictions on Use: See section 16 for more information

Manufacturer Address

Tronox Alkali Wyoming Corporation
1735 Market Street
Philadelphia, PA 19103
Tel: +1 877-362-2248 or +1 215-299-6904
www.tronox.com

Emergency telephone number

1 307 / 872 2452 (Plant - Green River, WY)
1 303/ 389-1409 (Medical - U.S. - Call Collect)

For leak, fire, spill or accident emergencies, call:
1 800 / 424 9300 (CHEMTREC - U.S.A.)
1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

| Serious eye damage/eye irritation | Category 2 |
Sodium Carbonate, Anhydrous

GHS Label elements, including precautionary statements

EMERGENCY OVERVIEW

Warning

Hazard Statements
H319 - Causes serious eye irritation

Precautionary Statements - Prevention
P264 - Wash face, hands and any exposed skin thoroughly after handling
P280 - Wear eye protection/ face protection

Precautionary Statements - 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

Hazard not otherwise classified (HNOC)
No hazards not otherwise classified were identified.

Other Information
May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Family</th>
<th>Alkali salt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formula</td>
<td>Na₂CO₃</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium carbonate</td>
<td>497-19-8</td>
<td>100</td>
</tr>
</tbody>
</table>

Synonyms are provided in Section 1.

4. FIRST AID MEASURES

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Skin Contact
Wash off with warm water and soap. Get medical attention if irritation develops and persists. Remove and wash contaminated clothing before re-use.

Inhalation
Remove person to fresh air. If signs/symptoms continue, get medical attention.
Sodium Carbonate, Anhydrous

Ingestion
Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

Most important symptoms and effects, both acute and delayed
Causes serious eye damage / eye irritation.

Indication of immediate medical attention and special treatment needed, if necessary
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing agent suitable for type of surrounding fire.

Specific Hazards Arising from the Chemical
Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

Hazardous Combustion Products
Fumes of sodium oxide. Carbon oxides (COx).

Explosion data
Sensitivity to Mechanical Impact
Not sensitive.

Sensitivity to Static Discharge
Not sensitive.

Protective equipment and precautions 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
Avoid dust formation. Sweep up to prevent slipping hazard.

Other
For further clean-up instructions, call Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

Environmental Precautions
Do not flush into surface water or sanitary sewer system.

Methods for Containment
Prevent large quantities of this product from contacting vegetation or waterways. Cover with plastic sheet to prevent spreading. Pick up and transfer to properly labeled containers. Keep in suitable and closed containers for disposal.

Methods for cleaning up
Pick up and transfer to properly labeled containers. Keep in suitable and closed containers for disposal. Dispose of waste as indicated in Section 13.

7. HANDLING AND STORAGE

Handling
Use air conveying/mechanical systems for bulk transfer to storage. Provide appropriate exhaust ventilation at places where dust is formed. In case of insufficient ventilation, wear suitable respiratory equipment if release of airborne dust is expected.

Storage
Store in original container. Keep in properly labeled containers. Keep container tightly closed.

Incompatible products
Aluminium. Powdered aluminum. Acids

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. Local nuisance dust standards apply.
Appropriate engineering controls

Engineering measures Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Individual protection measures, such as personal protective equipment

Eye/face Protection Tightly fitting safety goggles.

Skin and Body Protection Wear suitable protective clothing. Protective shoes or boots.

Hand Protection Nitrile rubber, Neoprene gloves

Respiratory Protection In case of inadequate ventilation wear respiratory protection.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice.

General information These recommendations apply to the product as supplied

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance Granules

Physical State Solid

Color White

Odor odorous

Odor threshold Not applicable

pH 11.4 (1% solution in water)

Melting point/freezing point 851 °C

Boiling Point/Range No information available

Flash point Not applicable

Evaporation Rate No information available

Flammability (solid, gas) Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes

Flammability Limit in Air

Upper flammability limit: No information available

Lower flammability limit: No information available

Vapor pressure No information available

Vapor density No information available

Density No information available

Specific gravity 2.52

Water solubility 212.5 g/L @ 20 °C

Solubility in other solvents No information available

Partition coefficient No information available

Autoignition temperature No information available

Decomposition temperature 400 °C

Viscosity, kinematic No information available

Viscosity, dynamic No information available

Explosive properties Not explosive

Oxidizing properties Non-oxidizing

Molecular weight 105.99

Bulk density 0.86 - 1.12 g/cm³ (Dense grades) 0.70 - 0.90 g/cm³ (Light Grades)

Kst 0 bar m/s

10. STABILITY AND REACTIVITY

Reactivity None under normal use conditions.

Chemical Stability Stable. Decomposes by reaction with strong acid.
Sodium Carbonate, Anhydrous

Possibility of Hazardous Reactions  None under normal processing.
Hazardous polymerization  Hazardous polymerization does not occur.
Conditions to avoid  Exposure to air or moisture over prolonged periods.
Hazardous Decomposition Products  Sodium oxides. Carbon oxides (COx).

11. TOXICOLOGICAL INFORMATION

Product Information

LD50 Oral  2,800 mg/kg (rat)
LD50 Dermal  > 2,000 mg/kg (rabbit)
LC50 Inhalation  2.3 mg/L (rat)
Eye Contact  Irritating to eyes.
Skin Contact  Non-irritating
Sensitization  Patch test on human volunteers did not demonstrate sensitization properties.

Information on toxicological effects

Symptoms  No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic toxicity  No known effect.
Mutagenicity  No information available
Carcinogenicity  Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH).
Reproductive toxicity  No information available.
STOT - single exposure  No information available.
STOT - repeated exposure  No information available.
Aspiration hazard  No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

<table>
<thead>
<tr>
<th>Sodium carbonate (497-19-8)</th>
<th>Duration</th>
<th>Species</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Ingredient(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium Carbonate</td>
<td>96 h LC50</td>
<td>Bluegill sunfish</td>
<td>300</td>
<td>mg/L</td>
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<tr>
<td>Sodium Carbonate</td>
<td>48 h EC50</td>
<td>Ceriodaphnia</td>
<td>200-227</td>
<td>mg/L</td>
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</table>

Persistence and degradability  Biodegradability does not pertain to inorganic substances.
Bioaccumulation  Does not bioaccumulate.
Mobility  Dissociates into ions.
Other Adverse Effects  None known.

13. DISPOSAL CONSIDERATIONS
Sodium Carbonate, Anhydrous

Waste disposal methods  
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). Dispose of in accordance with local regulations.

Contaminated Packaging  
Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

DOT  
NOT REGULATED

TDG  
NOT REGULATED

ICAO/IATA  
NOT REGULATED

IMDG/IMO  
NOT REGULATED

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

<table>
<thead>
<tr>
<th>Acute health hazard</th>
<th>Yes</th>
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<tbody>
<tr>
<td>Chronic health hazard</td>
<td>No</td>
</tr>
<tr>
<td>Fire hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden release of pressure hazard</td>
<td>No</td>
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<tr>
<td>Reactive Hazard</td>
<td>No</td>
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</table>

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated by state right-to-know regulations

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA (United States)</th>
<th>DSL (Canada)</th>
<th>EINECS/ELINCS (Europe)</th>
<th>ENCS (Japan)</th>
<th>China (IECSC)</th>
<th>KECL (Korea)</th>
<th>PICCS (Philippines)</th>
<th>AICS (Australia)</th>
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<td>Sodium carbonate 497-19-8 (100)</td>
<td>X</td>
<td>X</td>
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<td>X</td>
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</tbody>
</table>
Sodium Carbonate, Anhydrous

Mexico - Grade
Moderate risk, Grade 2

WHMIS Hazard Class
D2B - Toxic materials, Eye irritation
Class E: Corrosive to aluminum. Not corrosive to animal skin or carbon steel.

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
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<tbody>
<tr>
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<td>2</td>
<td>0</td>
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<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical hazard</th>
<th>Personal Protection</th>
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<td>0</td>
<td>0</td>
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</table>

NFPA/HMIS Ratings Legend
Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0

Product Certifications
This product meets the chemical testing specifications defined in the Food Chemicals Codex (FCC), 8th Edition.

This product is certified to NSF/ANSI Standard 60 for use in drinking water treatment at the specified maximum use limit. The MUL (maximum use level) for sodium carbonate, anhydrous is 150 mg/L under NSF/ANSI Standard 60.

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Prepared By:
Tronox Limited

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