

Revision Date: 4/1/23

Section 1: Product and Company Identification**1.1 Product Identifiers**

Product Name: Sodium Carbonate, Anhydrous

Chemical Name: Sodium Carbonate

Synonyms/Common Name: Disodium Carbonate, Carbonic Acid Sodium Salt/Soda Ash

Trade Name: Dense Soda Ash, Soda Ash Light, Synthetic Light Soda Ash, Soda Ash Liquid, Natural Light Soda Ash, Natural Light HA Soda Ash

CAS Number: 497-19-8

Molecular Formula: Na₂CO₃

1.2 Relevant Uses

Glass manufacturing, Paper production, Detergents, Chemical processing and Manufacturing, pH control

1.3 Emergency Telephone Number

Emergency Response Information Provider: CHEMTREC
1 800-424-9300 (CHEMTREC-USA)
1 703-527-3887 (CHEMTREC – All other countries, collect)

Section 2: Hazard(s) Identification**2.1 Classification of the Substance or Mixture**

OSHA HazCom Standard: 29CFR 1910.1200

Eye irritation, Category 2A, H319: Causes serious eye irritation

2.2 GHS Label Elements, including precautionary statements

Pictograms:



Irritant

Signal Word: Warning

Hazard Statement(s):

H319 Causes serious eye irritation

Precautionary Statement(s):

P264 Wash skin thoroughly after handling

P280 Wear eye protection/face protection

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.

2.3 Hazards Not Otherwise Classified Or Not Covered By GNS

None

Section 3: Composition/Information On Ingredients

3.1 Substances

Chemical Family: Alkali salt

Formula: Na_2CO_3

Chemical Name	CAS-No.	EC-No.	Concentration (%)
Sodium Carbonate	497-19-8	207-838-8	≥ 99%

Synonyms are provided in Section 1.

Section 4: First Aid Measures

4.1 Description of First-Aid Measures

General – Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with labored breathing: half-seated. Victim in shock: on

their back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: transfer to doctor/hospital.

Inhalation: Remove victim to fresh air. If symptoms persist, get medical attention.

Skin contact: Rinse with water. Soap may be used. Do not apply (chemical) neutralizing agents. . If symptoms persist, get medical attention.

Eye contact: Rinse immediately with plenty of water, also under eyelids, for at least 15 minutes. If symptoms persist, get medical attention.

Ingestion: Rinse mouth with water. Do not induce vomiting. Never give anything to an unconscious victim. If symptoms occur, get medical attention.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

Inhalation: Dry/sore throat. Coughing. Slight irritation. Exposure to high concentrations: Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Respiratory difficulties.

Skin contact: Prolonged skin contact may cause irritation

Eye contact: Inflammation/damage of the eye tissue. Corrosion of the eye tissue. Lacrimation.

Ingestion: Nausea. Vomiting. Abdominal pain. Irritation of the gastric/intestinal mucosa.

4.3 Indication Of Any Immediate Medical Attention and Special Treatment Needed

Treat symptomatically

Section 5: Fire-Fighting Measures

5.1 Extinguishing Media

Use extinguishing agent suitable for type of surrounding fire.

5.2 Special Hazards Arising From The Substance Or Mixture

Fumes of sodium oxide. Carbon oxides (CO_x)

5.3 Advice For Firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Special Protective Equipment For Firefighters

Wear self-contained breathing apparatus and use personal protective equipment.

Section 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see Section 8.

6.2 Environmental Precautions

Contain released substance. Do not release into surface water or sanitary sewer systems. Violent exothermic reaction with some acids releasing harmful gases (carbon dioxide).

6.3 Methods and Material For Containment and Cleaning Up

Prevent dust cloud formation. Scoop solid spill material into closed containers. Carefully collect the spill. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4 Reference To Other Sections

For disposal see Section 13.

Section 7: Handling And Storage

7.1 Precautions For Safe Handling

Avoid contact with skin and eyes. 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.

Section 7: Handling And Storage (cont.)

7.2 Conditions For Safe Storage, Including Any Incompatibles

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

7.3 Suitable Packaging Material

No data available

7.4 Incompatible Products

Aluminum, powdered aluminum and acids

Section 8: Exposure Controls/Personal Protection

Introductory Remarks: These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

8.1 Components With Workplace 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.

8.2 Exposure Controls

Where practical, provide general mechanical and/or local exhaust ventilation to prevent release of airborne dust into the work environment. An eye wash facility should be provided in storage and general work areas.

8.3 Personal Protective Equipment

Eyes and Face: For dusty or misty conditions, or when handling solutions where there is reasonable probability of eye contact, wear chemical safety goggles. Under these conditions do not wear contact lenses. Otherwise, appropriate ANZI approved eye and face protection equipment should be selected for the particular use intended for this material. Safety glasses with side shields are recommended.

Skin and Body: Wear suitable protective clothing. Protective shoes or boots. Wear impervious gloves when handling solutions (rubber, neoprene).

Respiratory: In cases of inadequate ventilation, wear respirators and components approved by government bodies like NIOSH/MSHA or EU CEN.

Section 8: Exposure Controls/Personal Protection (cont.)

8.4 Control of Environmental Exposure

Prevent leaks and spills when it can be done safely. For further information, see sections 6.2, 6.3 and 13.

Section 9: Physical and Chemical Properties

9.1 Information On Basic Physical and Chemical Properties

Appearance	White, granular solid
Odor	Odorless
Odor Threshold	Not applicable
Molecular Weight	105.99
pH	11.3 (1% solution in water)
Melting point/freezing point	854°C (1569°F)
Boiling point/range	No information available
Flash point	Not applicable
Evaporation rate	No information available
Flammability (solid/gas)	Not combustible but may decompose to produce corrosive and/or toxic fumes
Flammability in air	
Upper flammability limit	No information available
Lower flammability limit	No information available
Vapor pressure	No information available
Vapor density	No information available
Bulk density (g/l)	Dense grade: 0.9 – 1.1 Natural light grade: 0.7 – 0.9 Synthetic light grade: 0.5 – 0.7
Specific gravity	2.53 (vs water)

Water solubility	212.5 g/l @20°C
Partition coefficient	No information available
Auto-ignition temperature	No information available
Decomposition temperature	400°C
Viscosity, dynamic	No information available
Viscosity, kinematic	No information available
Explosive properties	Not explosive
Oxidizing properties	Non-oxidizing

9.2 Physical Hazards

No data available

Section 10: Stability and Reactivity

10.1 Reactivity

None under normal use conditions.

10.2 Chemical Stability

Stable. Decomposes by reaction with strong acid.

10.3 Possibility of Hazardous Reactions

None under normal processing.

10.4 Conditions to Avoid

Exposure to air or moisture over prolonged periods.

10.5 Incompatible Materials

Aluminum, powdered aluminum and acids.

10.6 Hazardous Decomposition

Sodium Oxides, Carbon oxides (CO_x)

Other precautions: When dissolving add to water cautiously and with stirring as solutions can get hot.

Section 11: Toxicological Information

11.1 Information On Toxicological Effects

11.1.1 Acute toxicity

LD₅₀Oral: 2,800 mg/kg, rat

LD₅₀Dermal: >2,000 mg/kg, rabbit

LC₅₀ Inhalation: 2.3 mg/l, 2 hour exposure time, rat

11.1.2 Corrosion/Irritation

Skin, rabbit

Mild irritant, 24 hours

11.1.3 Serious eye damage/eye irritation

Severe irritant, 24 hours

11.1.4 Respiratory or skin sensitization

No data available

Section 11: Toxicological Information (cont.)

11.1.5 Germ cell mutagenicity

No data available

11.1.6 Carcinogenicity

No data available. Not recognized as carcinogenic by ACGIH, IARC, NTP or OSHA

11.1.7 Reproductive toxicity

No data available

11.1.8 Specific target organ toxicity – single exposure

No data available

11.1.9 Specific target organ toxicity – repeated exposure

No data available

11.1.10 Chronic effects from short and long-term exposure

On continuous/repeated exposure/contact: Red skin. Dry skin.

Tingling/irritation of the skin. Affection of the nasal septum.

11.1.11 Aspiration hazard

No data available

Section 12: Ecological Information

12.1 Toxicity

Sodium Carbonate (497-19-8)

Duration	Species	Value	Units
96 hour, LC ₅₀	Bluegill sunfish	300 – 320	mg/l
96 hour, TL _m	Mosquito-fish	1200	mg/l
48 hour, TL _m	Mosquito-fish	840	mg/l
48 hour, EC ₅₀	Daphnia magna	265	mg/l
5 day, EC ₅₀	Nitzscheria linearis	242	mg/l

12.2 Persistence and Degradability

Not applicable as an inorganic substance

12.3 Bioaccumulative Potential

Does not bioaccumulate.

Section 12: Ecological Information (cont.)

12.4 Mobility

Air: Not applicable

Water: Considerable solubility and mobility

Soil/sediments: Low potential for absorption

12.5 Results of PBT and vPvB Assessment

Not applicable, inorganic substance

12.6 Other adverse effects

No data available

Section 13: Disposal Considerations

When this product is discarded or disposed of as purchased, it is neither a characteristic nor a listed hazardous waste according to US Federal RCRA regulations (40 CFR 261). As a non hazardous waste the material may be disposed of in a landfill in accordance with governmental regulations; check local or state regulations for applicable requirements prior to disposal. Any processing, usage, alteration, chemical additions to, or contamination of, the product may alter

the disposal requirements. Under Federal Regulations, it is the generator's responsibility to determine if a waste is a hazardous waste.

Section 14: Disposal Considerations

14.1 United States Department of Transportation (DOT)

Not regulated

14.2 International Maritime Dangerous Goods (IMDG)

Not regulated

14.3 International Air Transport Association

Not regulated

14.4 TDG/ADN/RID/ADR

Not regulated

Note: The above regulatory prescriptions are those valid on the date of publication of this SDS. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

Section 15: Regulatory Information

15.1 SARA Title III (Superfund Amendments and Reauthorization Act) SARA 302 Extremely Hazardous Substances, 40CFR355, Appendix A: Not Listed SARA 311 Hazard Class, 40CFR370: Immediate (Acute) SARA 312 Threshold Planning Quantity (TPQ), 40CFR370 Not Listed SARA 313 Reportable Ingredients, 40CFR372 Not Listed

15.2 CERCLA (Comprehensive Environmental Response Compensation and Liability Act)

40CFR302.4: There is no listed reportable quantity for this product.

15.3 TSCA (Toxic Substances Control Act)

This product is listed. No other TSCA rules affect this product.

15.4 State Regulations

This product does not contain any components that are regulated under California Proposition 65.

15.5 Other

CWA (Clean Water Act), Section 301/311: Not Listed

CAA (Clean Air Act), Section 112: Not regulated

15.6 Canada



WHMIS Classification: D2B Toxic Class E Corrosive Symbol: This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Ingredient Disclosure List: Listed
DSL Status (Domestic Substances List): Listed on DSL

15.7 European Union

EINECS Inventory: Listed: 207-838-8
Annex I (Substances Directive): Listed: 011-005-00-2 Xi, R-36 (See label details in Section 16)
German Water Classification: Hazard Class I, low hazard to waters EU –
Food Additives Directive (95/2/EC)
Annex I, Generally Permitted for Use in Food: E500

Section 15: Regulatory Information (cont.)

15.8 International

This product is also found in the chemical inventories of Australia, China, Korea, Japan and the Philippines.

Section 16: Regulatory Information

16.1 HMIS (Hazard Material Identification System)

Health	2
Flammability	0
Physical Hazard	0
Personal Protection (PPE)	Determined by user, dependent on local conditions

4: severe, 3: Serious, 2: Moderate, 0: Minimal

16.2 NFPA (National Fire Protection Association)

Health	2
Flammability	0
Reactivity	0
Special	None

4: Extreme, 3: High, 2: Moderate, 1: Slight, 0: Insignificant

16.3 Other Information

Soda Ash is produced in three principal grades: Dense, natural light and synthetic light soda ash. When these products are mixed in water they may be known as liquid soda ash. These grades differ only in physical characteristics such as bulk density, size and shape of particles; which influence flow characteristics and angle of repose. Other physical properties, as well as chemical properties of solutions are common to each grade of soda ash.

16.4 Certifications

NSF/ANSI 60: This product is certified to NSF/ANSI/CAN 60 for use in drinking water treatment at the specified maximum use limit (MUL). The MUL is 200 mg/L when used for corrosion control or scale control pH adjustment.



Section 16: Regulatory Information (cont.)

Kosher:

Halal: IFANCA



16.5 Disclaimer

The information given corresponds to the current state of our knowledge and experience of the product and is not exhaustive. This applies to product, which conforms to the specification unless otherwise stated. In the case of combinations and mixtures one must make sure that no new dangers can arise. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, protection of human welfare and the environment.

This Safety Data Sheet is offered for your information, consideration and investigation as required by the Federal Hazardous Products Act and related legislation. The information is believed to be accurate but Tata Chemicals provides no warranties, either expressed or implied.