



TATA CHEMICALS (SODA ASH) PARTNERS

**Distributed by:**  
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## Safety Data Sheet – Sodium Carbonate, Anhydrous

Date Reviewed: February 2015

Supersedes: January 2015

This document has been prepared to meet the requirements of the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200; the Canada's Workplace Hazards Materials Information System (WHMIS) and, the EC Directive, 2001/58/EC.

### 1. Product and Company Identification

<b>Product Name</b>	Sodium Carbonate, Anhydrous
<b>Alternate Product Name(s)</b>	Soda Ash, Disodium Carbonate Also: Dense Soda Ash, Soda Ash Light, Synthetic Light Soda Ash, Soda Ash Liquid, Natural Light Soda Ash, Natural Light HA Soda Ash
<b>Chemical Formula</b>	Na <sub>2</sub> CO <sub>3</sub>
<b>Product Use</b>	Glass manufacture, detergent manufacture, sodium chemicals and carbonate chemicals manufacture, pulp and paper, brine treatment, water hardness removal, pH adjustment in water or wastewater, flue gas desulphurization, coal treatment, ion exchange resin regeneration.
This chemical is certified to ANSI/NSF Standard 60, Drinking Water Chemicals – Health Effects (as packaged in the original, unopened container). Concentration not to exceed 100 ppm when used for corrosion control or scale control pH adjustment.	
<b>Manufacturer</b>	Tata Chemicals (Soda Ash) Partners 100 Enterprise Drive Rockaway, NJ 07866
<b>Emergency Telephone Numbers</b>	(800) 424-9300 (CHEMTREC – US) (613) 996-6666 (CANUTEC – Canada) (307) 872- 3431 (Plant – Green River, WY)

### 2. Hazards Identification


**Emergency Overview:** White, odorless, granular solid. Product is non-combustible. Reacts with acids to release carbon dioxide gas and heat. May irritate skin and eyes. Dusts may irritate respiratory tract. Not expected to be toxic to the environment, nor to aquatic organisms. Avoid simultaneous exposure to soda ash and lime dust. In the presence of moisture (i.e. perspiration) the two materials combine to form caustic soda (NaOH), which may cause burns.

#### Hazard Classification:

Class	Category	Hazard Statement
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Eye Irritant	Category 2	H319 Causes serious eye irritation
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### EC Labeling

<b>Name of substance to appear on label.</b>	Sodium Carbonate
<b>Symbol(s)</b>	 Xi – irritating
<b>Label Phrases</b>	R36: Irritating to eyes. S2: Keep out of reach of children. S22: Do not breathe dust. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

### Potential Health Effects:

<b>Skin</b>	Prolonged contact may cause skin irritation (red, dry, cracked skin).
<b>Eyes</b>	Irritating to the eyes.
<b>Ingestions</b>	Although low in toxicity, ingestion may cause nausea, vomiting, stomach ache, and diarrhea.
<b>Inhalation</b>	Prolonged inhalation of product dusts may irritate nose, throat, and lungs.
<b>Chronic Effects</b>	Excessive, long term contact may produce “soda ulcers” on hands and perforation of the nasal septum. Sensitivity reactions may occur from prolonged and repeated exposure. This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

## 3. Composition / Information on Ingredients

Chemical Name	CAS #	Wt. %	EC No.	EC Class
Sodium Carbonate	497-19-8	99.8	207-838-8	Xi, R36

## 4. First Aid Measures

<b>Skin</b>	Wash with plenty of soap and water. Get medical attention if irritation occurs and persists. Remove and wash contaminated clothing before re-use.
<b>Eyes</b>	Immediately flush with water for at least 15 minutes lifting the upper and lower eyelids intermittently. See a medical doctor or ophthalmologist as necessary.
<b>Ingestions</b>	Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. If symptoms persist, contact a doctor or poison control center.
<b>Inhalation</b>	Remove to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.
<b>Advice to Physician</b>	While internal toxicity is low, irritant effects of high concentrations may produce corneal opacities, and vesicular skin reactions in humans with abraded skin only. Treatment is symptomatic and supportive.

## 5. Fire Fighting Measures

<b>Extinguishing Media:</b>	Not combustible, use extinguishing method suitable for surrounding fire.
<b>Fire/Explosion Hazards:</b>	Not applicable.
<b>Fire Fighting Procedures:</b>	Wear full protective clothing and self-contained breathing apparatus
<b>Flammable Limits:</b>	Not applicable
<b>Auto ignition Temperature:</b>	Not applicable
<b>Hazardous Combustion Products:</b>	Carbon dioxide.
<b>Sensitivity to Impact:</b>	None
<b>Sensitivity to Static Discharge:</b>	None

## 6. Accidental Release Measures

<b>Personal Precautions:</b>	Refer to Section 8 “Exposure Controls / Personal Protection”
<b>Containment:</b>	Prevent large quantities of this product from contacting vegetation or waterways; large spills could kill vegetation and fish.
<b>Clean Up:</b>	This product, if spilled, can be recovered and re-used if contamination does not present a problem. Vacuum or sweep up the material and collect in a suitable container for disposal. If the spilled product is unusable due to contamination, consult state or federal environmental agencies for acceptable disposal procedures and locations. See Section 13
<b>Notification Requirements:</b>	Federal regulations do not require notification for spills of this product. State and local regulations may contain different requirements; consult local authorities.

## 7. Handling and Storage

<b>Handling:</b>	Use air conveying / mechanical systems for bulk transfer to storage. For manual handling of bulk transfer use mechanical ventilation to remove airborne dust from railcar, ship or truck. Use approved respiratory protection when ventilation systems are not available. Selection of respirators is based on the dust cloud generation. Keep material out of lakes, streams, ponds and sewer drains. Avoid eye contact or prolonged skin contact. Avoid breathing dusts. When dissolving, add to water cautiously and with stirring; solutions can get hot. Use good personal hygiene and housekeeping.
<b>Storage:</b>	Store in a cool dry area, away from incompatible products (acids). Prolonged storage may cause product to cake from atmospheric moisture.

## 8. Exposure Controls / Personal Protection

<b>Engineering Controls:</b>	Where possible, provide general mechanical and/or local exhaust ventilation to prevent release of airborne dust into the work environment. Eye wash facility should be provided in storage and general work area.
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### Personal Protective Equipment:

<b>Eyes and Face:</b>	For dusty or misty conditions, or when handling solutions where there is reasonable probability of eye contact, wear chemical safety goggles and hardhat. Under these conditions do not wear contact lenses. Otherwise, appropriate eye and face protection equipment (ANSI Z87 approved) should be selected for the particular use intended for this material. Safety glasses with side shields are recommended.
<b>Respiratory:</b>	Whenever dust in the worker's breathing zone cannot be controlled with ventilation or other engineering means, workers should wear respirators or dust masks approved by NIOSH/MSHA, EU CEN or comparable certification organization to protect them against airborne dust.

<b>Hands, Arms, and Body:</b>	Wear long-sleeve shirt and trousers, and impervious gloves for routine product use. Cotton gloves are sufficient for dry product; wear impervious (e.g., rubber, neoprene, etc.) gloves when handling solutions. Protective shoes or boots.
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**Exposure Guidelines:** Federal guidelines treat the ingredient(s) in this product as a nuisance dust, as no product-specific guidelines have been issued for exposure. As with all nuisance dusts, worker breathing zone concentrations should be measured by validated sampling and analytical methods. The following limits (OSHA and MSHA) apply to this material:

Particulates Not Otherwise Regulated:  
 OSHA (PEL / TWA): 15 mg/m<sup>3</sup> (total dust); 5 mg/m<sup>3</sup> (rasp fraction)  
 MSHA (PEL / TWA): 10 mg/m<sup>3</sup> (total dust)

Avoid simultaneous exposure to soda ash and lime dust. In the presence of moisture (i.e. perspiration) the two materials combine to form caustic soda (NaOH), which may cause burns.

The information noted above provides general guidance for handling this product. Specific work environments and material handling practices will dictate the selection and use of personal protective equipment (PPE).

## 9. Physical and Chemical Properties

<b>Appearance:</b>	White, granular solid
<b>Odor:</b>	Odorless
<b>Formula:</b>	Na <sub>2</sub> CO <sub>3</sub>
<b>Molecular Weight:</b>	105.99
<b>Bulk Density (g/l)</b>	Dense grades: 0.9 – 1.1 Natural light grade: 0.7 – 0.9    Synthetic light grade: 0.5 – 0.7
<b>Specific Gravity:</b>	2.533 (vs. water)
<b>Boiling Point:</b>	Decomposes
<b>Melting Point:</b>	854°C (1569°F)
<b>Evaporation Rate:</b>	Not applicable
<b>Percent Volatile:</b>	0%
<b>Vapor Density:</b>	Not applicable
<b>Vapor Pressure:</b>	Not applicable
<b>pH (1% solution)</b>	11.3
<b>Flash Point</b>	None

## 10. Stability and Reactivity

<b>Stability:</b>	Stable
<b>Conditions to Avoid:</b>	Contract with acids will release carbon dioxide, heat. Contract with lime dust in the presence of moisture can produce corrosive sodium hydroxide.
<b>Materials to avoid</b>	May react with aluminum, acids, fluorine, lithium, and 2,4,6-Trinitrotoluene.
<b>Polymerization:</b>	Will not occur.
<b>Hazardous Decomposition</b>	When heated to decomposition, carbon dioxide is released.

<b>Products</b>	
<b>Other Precautions:</b>	When dissolving, add to water cautiously and with stirring; solutions can get hot.

## 11. Toxicological Information

<b>Eye:</b>	Severe irritant (50 mg, rabbit).
<b>Skin:</b>	Mild irritant (500 mg/24hr, rabbit). Minor irritation may occur on abraded skin. Not a sensitizer (tested at 0.25% solution).
<b>Oral:</b>	LD <sub>50</sub> , rat: 4,090 mg/kg
<b>Inhalation:</b>	LC <sub>50</sub> , rat, 2hr 2.3 mg/l 24 – hour LC <sub>50</sub> : 800 mg/m <sup>3</sup> , 20 h exposure (guinea pig) (moderate toxicity)
<b>Chronic:</b>	Excessive, long term contact may produce “soda ulcers” on hands and perforation of the nasal septum. Sensitivity reactions may occur from prolonged and repeated exposure.
<b>Carcinogenicity:</b>	Not designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

## 12. Ecological Information

<b>Acute ecotoxicity:</b>	96 – hour LC <sub>50</sub> : 265 – 565 mg/l (daphnia magna) (low toxicity) 300 – 320 mg/l (blue gill sunfish) (low toxicity) 96 – hour TL <sub>m</sub> : 1200 mg/l (mosquito-fish) 48 – hour TL <sub>m</sub> : 840 mg/l (mosquito-fish) 48 – hour EC <sub>50</sub> : 265 mg/l (daphnia magna) 5 Day EC <sub>50</sub> : 242 mg/l (Nitzscheria linearis)
<b>Chronic ecotoxicity:</b>	7 Day EC, biomass: 14 mg/l (phytoplankton)
<b>Mobility:</b>	Air: Not Applicable Water: Considerable solubility and mobility. Soil / sediments: Non-significant adsorption
<b>Abiotic degradation:</b>	Water (hydrolysis): degradation's products: carbonate (pH>10) / carbonic acid / carbon dioxide (pH<6). Soil: Hydrolysis as a function of pH.
<b>Biotic degradation:</b>	Aerobic / anaerobic: Not applicable (inorganic compound)
<b>Potential for bioaccumulation:</b>	Not applicable (ionizable inorganic compound)

Observed effects are related to alkaline properties of the product. Product is not significantly hazardous for the environment.

## 13. Disposal Considerations

<b>Disposal</b>	When this product is discarded or disposed of, as purchased, it is neither a
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<b>Method:</b>	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 government 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.
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## 14. Transportation Information

<b>Proper Shipping Name:</b>	Not regulated
<b>Primary Hazard Class / Division:</b>	Not regulated
<b>UN / NA Number:</b>	Not applicable
<b>Label(s), Placard(s), Marking(s):</b>	Not applicable
<b>Reportable Quantity (RQ)</b>	None
<b>49 STCC Number:</b>	Not Applicable
<b>ADR (EU), TDG (Canada)</b>	Not regulated
<b>IMDG (sea) , ICAO (air), IATA (air)</b>	Not regulated

## 15. Regulatory Information

### UNITED STATES:

#### **SARA Title III (Superfund Amendments and Reauthorization Act)**

<b>Section 302 Extremely Hazardous Substances:</b> 40CFR355, Appendix A	Not listed
<b>Section 311 Hazard Class</b> 40CFR370	Immediate (acute)
<b>Section 312 Threshold Planning Quantity (TPQ)</b> 40CFR370	No TPQ listed for sodium carbonate.
<b>Section 313 Reportable Ingredients</b> 40CFR372	Not listed

#### **CERCLA (Comprehensive Environmental Response Compensation and Liability Act):**

40CFR302.4 –

There is no listed RQ (reportable quantity) for this product.

#### **TSCA (Toxic Substance Control Act)**

This product is listed on the TSCA Inventory of Chemical Substances. No other TSCA rules affect this product

#### **State Regulations:**


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

#### **Other:**

Clean Water Act (CWA) – Section 301/ 311: Not listed

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

## **CANADA:**

<b>WHMIS Classification:</b>	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.
<b>WHMIS Ingredient Disclosure List</b>	Listed
<b>DSL Status (Domestic substances list)</b>	Listed on DSL

## **EUROPEAN UNION:**

<b>EINECS Inventory</b>	Listed: 207-838-8
<b>Annex I (Substances Directive)</b>	Listed: 011-005-00-2 Xi, R-36 (See label details in Section 16)
<b>German Water Classification</b>	hazard class 1, low hazard to waters
<b>EU - Food Additives Directive (95/2/EC) - Annex I - Generally Permitted for Use in Foodstuff</b>	E500

## **INTERNATIONAL:**

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

## **16. Other Information**

### **HMIS** (Hazardous Material Identification System)

Health	2
Flammability	0
Physical Hazard	0
Personal Protection (PPE)	B

Protection = B (Safety glasses and gloves)

4 = Severe, 3 = Serious, 2 = Moderate, 1 = Slight, 0 = Minimal

### **NFPA** (National Fire Protection Association System)

Health	2
Flammability	0
Reactivity	0
Special	None

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



**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 and size and shape of particles, which influence flow characteristics and angle of repose. Other physical properties, as well as chemical as chemical properties of solutions, are common to each grade of soda ash.

**Certified to ANSI / NSF 60**

Concentration not to exceed 100 ppm when used for corrosion control or scale control pH adjustment.



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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 this 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, and protection of human welfare and the environment.

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

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