TATA CHEMICALS (SODA ASH) PARTNERS

Safety Data Sheet
Sodium Carbonate, Anhydrous

Date Reviewed: June 2015

Supersedes: February 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.

SECTION 1: Product and Company Identification

Product Name	Sodium Carbonate, Anhydrous
Alternate Product Name(s)	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
Chemical Formula	Na_2CO_3
Product Use	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.	
Manufacturer	Tata Chemicals (Soda Ash) Partners 100 Enterprise Drive Rockaway, NJ 07866
Emergency Telephone Numbers	(800) 424-9300 (CHEMTREC – US) (613) 996-6666 (CANUTEC – Canada) (307) 872-3431 (Plant – Green River, WY)

SECTION 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	Pictogram
Eye Irritant	Category 2	H319 Causes serious eye irritation	 Warning: Eye Irritate

Precautionary Statements:

Prevention

P264 Wash 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.

Hazards not otherwise identified

None identified

Potential Health Effects:

Skin	Prolonged contact may cause skin irritation (red, dry, cracked skin).
Eyes	Irritating to the eyes.
Ingestions	Although low in toxicity, ingestion may cause nausea, vomiting, stomach ache, and diarrhea.
Inhalation	Prolonged inhalation of product dusts may irritate nose, throat, and lungs.
Chronic Effects	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.

SECTION 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

SECTION 4: First Aid Measures

Skin	Wash with plenty of soap and water. Get medical attention if irritation occurs and persists. Remove and wash contaminated clothing before re-use.
Eyes	Immediately flush with water for at least 15 minutes lifting the upper and lower eyelids intermittently. See a medical doctor or ophthalmologist as necessary.
Ingestions	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
Inhalation	Remove to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.
Advice to Physician	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.

SECTION 5: Firefighting measures

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

SECTION 6: Accidental Release Measures

Personal Precautions	Refer to Section 8 "Exposure Controls / Personal Protection"
Containment	Prevent large quantities of this product from contacting vegetation or waterways; large spills could kill vegetation and fish.
Clean Up	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 "Disposal Considerations".
Notification Requirements	Federal regulations do not require notification for spills of this product. State and local regulations may contain different requirements; consult local authorities.

SECTION 7: Handling and Storage

Handling	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.
Storage	Store in a cool dry area, away from incompatible products (acids). Prolonged storage may cause product to cake from atmospheric moisture.

SECTION 8: Exposure Controls/ Personal Protection

Engineering Controls	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.

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 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.
Respiratory	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.
Hands, Body, and Arms	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.

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^3 (total dust); 5 mg/m^3 (rasp fraction) MSHA (PEL / TWA): 10 mg/m^3 (total dust)

SECTION 9: Physical and Chemical Properties

Appearance	White, granular solid
Odor	Odorless
Odor Threshold	Not applicable
Formula	Na_2CO_3
Molecular Weight	105.99
pH	11.3
Melting point/freezing point	854°C (1569°F)
Initial boiling point/boiling range	Decomposes
Flash point	None
Evaporation rate	Not Applicable
Flammability (solid, gas)	Not combustible
Flammability in Air	
Upper flammability limit	No information available
Lower flammability limit	No information available
Vapor Pressure	Not applicable
Vapor Density	Not applicable
Bulk Density (g/l)	Dense grades: 0.9 – 1.1 Natural light grade: 0.7 – 0.9 Synthetic light grade: 0.5 – 0.7
Specific Gravity	2.533 (vs. Water)
Water Solubility(ies)	212.5 g/l @ 20°C
Partition coefficient	No information available
Auto-ignition temperature	No information available
Decomposition temperature	400°C
Viscosity	
Viscosity, dynamic	No information available
Viscosity, cinematic	No information available
Percent Volatile	0%

SECTION 10: Stability and Reactivity

Stability	Stable
Conditions to Avoid	Contract with acids will release carbon dioxide, heat. Contract with lime dust in the presence of moisture can produce corrosive sodium hydroxide.
Materials to Avoid	May react with aluminum, acids, fluorine, lithium, and 2,4,6- Trinitrotoluene.
Polymerization	Will not occur.
Hazardous Decomposition	When heated to decomposition, carbon dioxide is released.
Other Precautions	When dissolving, add to water cautiously and with stirring; solutions can get hot.

SECTION 11: Toxicological Information

Eye	Severe irritant (50 mg, rabbit).
Skin	Mild irritant (500 mg/24hr, rabbit). Minor irritation may occur on abraded skin. Not a sensitizer (tested at 0.25% solution).
Oral	LD_{50}, rat: 4,090 mg/kg
Inhalation	LC_{50}, rat, 2hr 2.3 mg/l 24 – hour LC_{50}: 800 mg/m^3, 20 h exposure (guinea pig) (moderate toxicity)
Chronic	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.
Carcinogenicity	Not designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

SECTION 12: Ecological Information

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

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

SECTION 13: Disposal Considerations

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

SECTION 14: Transport Information

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

SECTION 15: Regulatory Information

SARA Title III (Superfund Amendments and Reauthorization Act)

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

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

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 1, low hazard to waters
EU – Food Additives Directive (95/2/EC) – Annex I – Generally Permitted for Use in Food	E500

INTERNATIONAL:

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

SECTION 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.