

SPECIFICATIONS FOR SODA ASH

No.	Characteristics	RANGE
1	Bulk Density (Dense), gr/cm ³	0.85 – 1.1
2	Bulk Density (Light), gr/cm ³	0.55 – 0.65
3	Alkalinity (as NA ₂ CO ₃)	Min % 99
4	Chloride in term of NaCl	Max % 0.4
5	Iron (Fe ⁺²)	Max % 0.002
6	Insoluble in water	Max % 0.1



Soda Ash – MSDS Form of Carbonate Sodium

- **Chemical Products & Company Identification**

MSDS Name: Sodium Carbonate

CAS #497-19-8

Hazard Symbol: XI

Risk Phrases: R 36 - Irritating to the eyes

Product Name: Sodium Carbonate

Synonym: Bi-sodium Carbonate, Calcined Soda, Carbonic Acid, Di-sodium salt, Crystal Carbonate, Soda, Soda Ash, Soda Monohydrate, Sodium Carbonate, Monohydrate, Solvay Soda,...

Physical State: Powder, White Crystalline Powder

Molecular Formula: Na_2CO_3

Structure Formula: $\text{Na}_2.\text{CO}_3$

Molecular Weight: 105.99

Color: White

Odour: Odourless

Melting Point: 851° Celsius

Solubility in water: 17 ~ 33g/ 100ml water (20 ° Celsius)

Bulk Density (Dense): 0.9 ~ 1.1 g/cc

Bulk Density (Light): 0.55 ~ 0.65 g/cc

Specific Gravity/Density: 2.5320 g/cm³

Uses: Oxidation & Bleaching agent used in textile, detergent, pharmaceutical & Cosmetic industry

- **HAZARD IDENTIFICATION**

Inhalation: May cause respiratory tract irritation such as coughing & sneezing

Ingestion: May cause irritation of digestive tract (Extremely large oral doses may cause gastrointestinal disturbances)

Skin Contact: May cause skin irritation but no adverse effects expected.

Eye Contact: May cause mild irritation, redness, watering and pain

Chronic Exposure: No information found

- **FIRST-AID MEASURES**

Swallow: Harmful if swallowed.

May cause irritation. Avoid Breathing vapors and dusts. Use with adequate ventilation. Avoid contact with eyes, skin & clothes. Wash thoroughly after handling. Keep container closed

Eyes: Wash eyes with plenty of water for at least 15 minutes. Opening in the eyes into the water occasionally. Seek medical aid immediately.

Skin: Wash with soap and water. Remove contaminated clothing and wash before re-use. If irritation persists seek medical advice immediately.

Inhalation: If breathing difficulties arise, give oxygen, get medical aid if cough or other symptoms appear.

Contained breathing apparatus & protective clothing to prevent contact with skin and clothing.

- **FIRE FIGHTING MEASURES:**

Use agent most appropriate to extinguish surrounding fire.

- **ACCIDENT RELEASE MEASURES:**

General Information: Use proper protective equipment such as:

Eyes: Wear appropriate protective eye glasses or chemical safety goggles as described by OHSAS eye and face protection regulations.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved when necessary

- **HANDLING AND STORAGE**

Handling: Handle with adequate surrounding ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin and clothing. Avoid ingestion and inhalation.

Storage: Store in a cool, dry place. Out of direct sunlight. Store in a ventilated area. Store away from incompatible substances such as acids, alkalis, reducing agents, oxidizing agents, rusty metals & their compounds (such as iron, copper, brass, bronze, cobalt, nickel and lead) as well as organic & combustible material. Maximum product storage temperature is 35° Celsius. Product is stable under this temperature. Store in a tightly closed container. Avoid exposure to moisture, direct sun-light or sources of heat & contamination hazards. Do not return unused product to original container. Do not allow dust to accumulate.

- **EXPOSURE CONTROLS/ PERSONAL PROTECTION**

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower. Use adequate ventilation to keep air borne contamination low.

- **STABILITY & REACTIVITY**

Chemical Stability: Stable at room temperature in closed container under normal storage and handling conditions.

Decomposed by acids with effervescence, evolution of carbon dioxide.

Conditions to avoid: Incompatible materials, dust generation, excess heat, temperature above 300° Celsius, exposure to moisture and water.

Incompatibility with other materials: Reacts explosively with red – hot aluminium metal. Incompatible with ammonia + silver nitrate. 2,4 dinitrotoluene. 2,4,6 trinitrotoluene, sulfuric acid, sodium sulfide + water, lithium, phosphorus pentoxide & hydrogen peroxide. Hot concentrated of sodium carbonate are mildly corrosive to steel. Simultaneous exposure of soda ash and lime dusts in the presence of moisture can result in formation of corrosive caustic soda which may cause burns.

Hazardous Decomposition Products: Carbon dioxide, carbon monoxide, toxic fumes and sodium oxide.

Hazardous Polymerization: Has not been reported.

- **Ecological Information**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification

- **Transport Information**

No special regulation. Non hazardous for air, sea and road freight.