

# SODIUM CARBONATE

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## 1. Product Identification

**Synonyms:** Carbonic acid, disodium salt; disodium carbonate; soda ash

**CAS No.:** 497-19-8

**Molecular Weight:** 105.99

**Chemical Formula:** Na<sub>2</sub>CO<sub>3</sub>

**Product Codes:** CHEM-036

## 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Sodium Carbonate	497-19-8	99 - 100%	Yes

## 3. Hazards Identification

### Emergency Overview

**DANGER! MAY CAUSE EYE BURNS. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN AND RESPIRATORY TRACT.**

**SAF-T-DATA<sup>(tm)</sup>** Ratings (Provided here for your convenience)

Health Rating: 1 - Slight

Flammability Rating: 1 - Slight

Reactivity Rating: 2 - Moderate

Contact Rating: 3 - Severe (Life)

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES

Storage Color Code: Green (General Storage)

### Potential Health Effects

#### Inhalation:

Inhalation of dust may cause irritation to the respiratory tract. Symptoms from excessive inhalation of dust may include coughing and difficult breathing. Excessive contact is known to cause damage to the nasal septum.

#### Ingestion:

Sodium carbonate is only slightly toxic, but large doses may be corrosive to the gastrointestinal tract where symptoms may include severe abdominal pain, vomiting, diarrhea, collapse and death.

#### Skin Contact:

Excessive contact may cause irritation with blistering and redness. Solutions may cause severe irritation or burns.

**Eye Contact:**

Contact may be corrosive to eyes and cause conjunctival edema and corneal destruction. Risk of serious injury increases if eyes are kept tightly closed. Other symptoms may appear from absorption of sodium carbonate into the bloodstream via the eyes.

**Chronic Exposure:**

Prolonged or repeated skin exposure may cause sensitization.

**Aggravation of Pre-existing Conditions:**

No information found.

## 4. First Aid Measures

**Inhalation:**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:**

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**Skin Contact:**

Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Eye Contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

**Note to Physician:**

Consider endoscopy in all suspected cases of sodium carbonate poisoning. Perform blood analysis to determine if dehydration, acidosis, or other electrolyte imbalances occurred.

## 5. Fire Fighting Measures

**Fire:**

Not considered to be a fire hazard.

**Explosion:**

Not considered an explosion hazard, but sodium carbonate may explode when applied to red-hot aluminum.

**Fire Extinguishing Media:**

Use any means suitable for extinguishing surrounding fire.

**Special Information:**

Use protective clothing and breathing equipment appropriate for the surrounding fire.

## 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

## 7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

## 8. Exposure Controls/Personal Protection

### **Airborne Exposure Limits:**

None established.

### **Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

### **Personal Respirators (NIOSH Approved):**

For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

### **Skin Protection:**

Wear protective gloves and clean body-covering clothing.

### **Eye Protection:**

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

## 9. Physical and Chemical Properties

### **Appearance:**

White powder or granules.

### **Odor:**

Odorless.

### **Solubility:**

45.5 g/100 ml water @ 100C (212F)

### **Specific Gravity:**

2.53

### **pH:**

11.6 Aqueous solution

### **% Volatiles by volume @ 21C (70F):**

0

### **Boiling Point:**

Decomposes.

### **Melting Point:**

851C (1564F)

### **Vapor Density (Air=1):**

No information found.

**Vapor Pressure (mm Hg):**

No information found.

**Evaporation Rate (BuAc=1):**

No information found.

## 10. Stability and Reactivity

**Stability:**

Stable under ordinary conditions of use and storage. Hygroscopic. Readily absorbs moisture from the air. Solutions are strong bases.

**Hazardous Decomposition Products:**

Oxides of carbon and sodium oxide.

**Hazardous Polymerization:**

Will not occur.

**Incompatibilities:**

Fluorine, aluminum, phosphorous pentoxide, sulfuric acid, zinc, lithium, moisture, calcium hydroxide and 2,4,6-trinitrotoluene. Reacts violently with acids to form carbon dioxide.

**Conditions to Avoid:**

Moisture, heat, dusting and incompatibles.

## 11. Toxicological Information

For Sodium Carbonate:

Oral rat LD50: 4090 mg/kg; inhalation rat LC50: 2300 mg/m<sup>3</sup>/2H; irritation eye rabbit: 50 mg severe; investigated as a mutagen, reproductive effector.

\Cancer Lists\  
 —NTP Carcinogen—

Ingredient	Known	Anticipated	IARC Category
Sodium Carbonate (497-19-8)	No	No	None

## 12. Ecological Information

**Environmental Fate:**

No information found.

**Environmental Toxicity:**

96 Hr LC50 *Lepomis macrochirus*: 300 mg/L [static];

48 Hr EC50 *Daphnia magna*: 265 mg/L

## 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

## 14. Transport Information

Not regulated.



**Label First Aid:**

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. Get medical attention for any breathing difficulty. In all cases, get medical attention.

**Product Use:**

Laboratory Reagent and Consumer Hobby

**Revision Information:**

No Changes.

**Disclaimer:**

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