

# PRODUCT DATA

## SODA ASH (SODIUM CARBONATE, ANHYDROUS) TECHNICAL GRADE

FORMULA	Na <sub>2</sub> CO <sub>3</sub>
NOMENCLATURE	Sodium Carbonate, Anhydrous Soda Ash
CAS NUMBER	497-19-8
CAS INDEX NAME	Carbonic Acid Disodium Salt
GRADE	Technical
MOLECULAR WEIGHT	106.0
DESCRIPTION	Sodium carbonate, anhydrous, is a white, odorless, granular material, free of visible contamination. Meets federal specification O-S-571 G, Type II (Lite®) and Type III (Dense). Meets AWWA Std. B201-92. Meets chemical requirements of ASTM Specification D458-79. It has been certified by NSF International to ANSI/NSF Std. 60-1988 for use in the treatment of drinking water at a maximum dosage of 100 mg/L.
CONTAINERS	50- and 100-lb net weight Paper Bags Jumbo Hopper Rail Cars Bulk Trucks Ocean Vessels Super Sacks

(continued on reverse side)



RHÔNE-POULENC BASIC CHEMICALS CO.  
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# SODA ASH (SODIUM CARBONATE, ANHYDROUS)

Technical Grade, continued

**SPECIFICATIONS:** The following tables are for:

## DENSE

PROPERTY	SPECIFICATION	TYPICAL
Sodium Carbonate (%Na <sub>2</sub> CO <sub>3</sub> )	99.2 minimum	99.8
Sodium Oxide (%Na <sub>2</sub> O)	58.1 minimum	58.4
Sodium Sulfate (%Na <sub>2</sub> SO <sub>4</sub> )	0.15 maximum	0.04
Sodium Chloride (%NaCl)	0.08 maximum	0.01
Water Insolubles, %	0.05 maximum	0.02
Bulk Density, lbs/ft <sup>3</sup>	56.2-65.0	60
Sieving, %:		
On 20 mesh	0.4 maximum	0.2
On 30 mesh	5.0 maximum	1.9
On 100 mesh	85.0 minimum	96.2
Through 200 mesh	2.0 maximum	0.7

## LITE®

PROPERTY	SPECIFICATION	TYPICAL
Sodium Carbonate (%Na <sub>2</sub> CO <sub>3</sub> )	99.2 minimum	99.8
Sodium Oxide (%Na <sub>2</sub> O)	58.1 minimum	58.4
Sodium Sulfate (%Na <sub>2</sub> SO <sub>4</sub> )	0.15 maximum	0.085
Sodium Chloride (%NaCl)	0.09 maximum	0.03
Water Insolubles, %	0.05 maximum	0.03
Bulk Density, lbs/ft <sup>3</sup>	48.0-56.2	52
Sieving, %:		
On 20 mesh	5.0 maximum	1.5
On 30 mesh	10.0 maximum	4.0
On 100 mesh	80.0 minimum	89.7
Through 200 mesh	5.0 maximum	1.4

**USES:** The following are some uses for sodium carbonate, anhydrous:

INDUSTRY	APPLICATIONS
Agriculture	Water pond sealant
Ceramics and Glass	In the manufacture of ceramics and glass
Chemical	In manufacture of sodium compounds; in photographic materials; in the neutralization of acids, for pH adjustment; for stack gas scrubbing
Metallurgy	In aluminum production; in metal processing
Petroleum	In petroleum refining; in drilling muds
Pulp and Paper	In manufacture of pulp and paper
Soap and Synthetic Detergents	In manufacture of saps, cleaners, and detergents; for saponification of fatty acids
Textiles	In the manufacture of textiles; in cotton/fabric bleaching
Water and Waste Treatment	pH and alkalinity control, softener (recarbonation), ion exchange regeneration
Gas Treatment	Flue gas scrubbing for removal of SO <sub>3</sub>

# Material Safety Data Sheet



## North American Chemical Company

13200 Main Street  
Trona, California 93562

soda ash

For more detailed information on the hazards of this product, write to the address above. Technical Information Bulletin is also available. For emergency information, telephone (619) 372-2291 any time.

### PRODUCT IDENTIFICATION

Brand Name ..... TRONA soda ash  
Chemical Name ..... Sodium carbonate  
Common Name ..... Soda ash  
Formula .....  $\text{Na}_2\text{CO}_3$   
DOT Proper .....  
Shipping Name ..... Not applicable  
DOT Hazard .....  
Class ..... Not applicable  
DOT I.D. Number ..... Not applicable  
Reportable Quantity (RQ) ..... Not applicable  
CAS Number ..... 497-19-8

### PHYSICAL AND CHEMICAL PROPERTIES

State ..... Granular solid  
Melting Point C ..... 851  
Boiling Point C ..... Decomposes  
Color ..... White  
Odor ..... None  
Bulk Density, lb/cu. ft ..... 50 to 65  
Weight Per Gallon ..... Not applicable  
Specific Gravity @ 20C ..... 2.5  
Water Solubility, % by wt. @ 20C ..... 22.6  
Flash Point And Method ..... Not applicable  
pH ..... Not applicable

### HAZARDOUS INGREDIENTS

Chemical Name	Common Name	CAS Number	Hazard
Sodium carbonate	Soda ash	497-19-8	Irritant to eyes, mucous membranes and skin.

### PHYSICAL HAZARD INFORMATION

Explosive: No      Upper Explosive Limit: Not applicable      Lower Explosive Limit: Not applicable

Pyrophoric: No

Flammable: No      Flammability Class: Not applicable

Combustible: No      Organic Peroxide: No

Oxidizer: No      Compressed Gas: No

Reactivity: Normally stable. May react violently with strong acids. Carbon dioxide gas and large quantities of heat can be evolved. Reacts with hydrated lime in the presence of moisture to form caustic soda, a corrosive.

Incompatibilities: Keep away from aluminum powder, fluorine, phosphorous pentoxide, sulfuric acid, ammoniacal silver nitrate and molten lithium.

Hazardous Decomposition: Soda ash decomposes at temperature above 1000C, releasing carbon dioxide gas ( $\text{CO}_2$ ). Carbon dioxide is an asphyxiant and may affect respiration rate or interfere with breathing. The sodium oxide residue sublimates at 1275C, forming vapors and mists of caustic soda on contact with moisture or water.

Conditions To Avoid: Do not expose to intense heat.

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## HEALTH INFORMATION

Precautionary Information: CAUTION! Causes irritation. This product is a severe irritant to the eyes and a moderate irritant to the nose and skin.

Symptoms Of Exposure: Eye, nose, or skin irritation.  
Burning sensation to nose, throat and eyes.  
Redness of the skin.  
Sneezing and coughing.

Restrictive Medical Conditions: Eye or skin disease and breathing or respiratory disorder will be aggravated by exposure to this chemical.

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## PRIMARY ROUTE(S) OF ENTRY

Eye and skin contact, inhalation (breathing), and ingestion (swallowing).

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## TOXICITY INFORMATION

Oral - rat LD<sub>50</sub> 2463 mg/kg; Intraperitoneal - mouse LD<sub>50</sub> 117 mg/kg;

Skin irritation - rabbit 50 mg/24 hour, moderate; Eye irritation - rabbit 100 mg/24 hour, severe.

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## EXPOSURE LIMITS

OSHA: Not established

ACGIH: Not established

Other: ACGIH: TLV-TWA for nuisance dust is 10 mg/m<sup>3</sup> total dust or 5 mg/m<sup>3</sup> respirable dust.

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Reported As A Potential Carcinogen  
Or Carcinogen

Not Applicable  
 OSHA

National Toxicology Program  
 International Agency For Research On Cancer

### PRECAUTIONS FOR SAFE HANDLING AND USE

Avoid contact with eyes, skin, and clothing.  
Avoid breathing dust  
Use with adequate ventilation.  
Keep container closed when not in use.  
Wash thoroughly after handling.

### SPILL AND LEAK PROCEDURES

Soil Release: Shovel and sweep up. Dispose of in a chemical waste facility as permitted by federal (RCRA), state and local regulations.

Water Spill: Dilute and disperse with water jets, propellers or similar agitation techniques.

Air Spill: Keep upwind. Treat impact site as appropriate for soil or water spill.

Occupational Spill: Shovel and sweep up. As permitted, small spills may be washed to an industrial sewer. Large amounts can be disposed of in a chemical waste facility as permitted by federal, state and local regulations.

RCRA Waste Number: Not applicable.

### ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT

Ventilation: Use general dilution and local exhaust ventilation techniques to meet nuisance dust exposure limit.

Respirator: Use NIOSH/MSHA approved dust type respirator.

Eye Protection: Use safety glasses or safety goggles. Ensure eyewash fountain is located in immediate work area.

Gloves: Use gloves that will not allow alkaline solutions to penetrate.

Clothing: Wear easily washable clothing. Change daily or more often if contaminated. Wash clothing before reuse.

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## EMERGENCY PROCEDURES

**Fire:** This product is not flammable and does not support combustion.

**Spill or Leak:** Sweep up and shovel into containers for later disposal.

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## FIRST AID PROCEDURES

**Ingestion:** If swallowed, do not induce vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person. Call a physician.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.

**Skin Contact:** Flush with plenty of water. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

**Note To Physician:** The chemical of exposure is sodium carbonate which is alkaline in solution.

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