



Product Information (203) 740-3471 / Emergency Assistance CHEMTREC 1-800-424-9300

MATERIAL SAFETY DATA SHEETS

SECTION I

PRODUCT AND COMPANY IDENTIFICATION

Product: Sodium carbonate

This MSDS is valid for all grades and catalog #'s

Synonyms: Crystal Carbonate, Disodium Carbonate, Sal Soda, Soda Asha, Washing Soda; Carbonic acid, disodium salt; Bisodium carbonate Calcined soda;

Formula: Na₂-C-O₃

Manufacturer: PHARMCO-AAPER

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SECTION II

COMPOSITION /INFORMATION ON INGREDIENTS

% by Material CAS TLV/PEL LC50/LD50
weight #

% by weight	Material	CAS #	TLV/PEL	LC50/LD50
100	Sodium carbonate	497-19-8	Not available.	ORAL (LD50): Acute: 4090 mg/kg [Rat]. 6600 mg/kg [Mouse]. DUST (LC50): Acute: 2300 mg/m ³ 2 hours [Rat]. 1200 mg/m ³ 2 hours [Mouse].

SECTION III

HAZARDS IDENTIFICATION

Potential Acute Health Effects: Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation (lung irritant).

Potential Chronic Health Effects:

Slightly hazardous in case of skin contact (sensitizer).

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance may be toxic to upper respiratory tract, skin, eyes.

Repeated or prolonged exposure to the substance can produce target organs damage.

SECTION IV

FIRST AID

Obtain medical attention for all cases of over-exposure.

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse.

Thoroughly clean shoes before reuse. Get medical attention.

Hazardous Skin Contact: Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Hazardous Inhalation: Not available.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Hazardous Ingestion: Not available.

SECTION V

FIRE FIGHTING MEASURES

Fire:

Flammability of the Product: Non-flammable.

Auto-Ignition temperature: Not applicable.

Flash point: Not applicable.

Flammable limits: Not applicable.

Products of Combustion: Emits Na₂O fumes when heated to decomposition.

Fire Hazards: Not applicable.

Explosion Hazards: Risks of explosion of the product in presence of mechanical impact: Not available.

Presence of Risks of explosion of the product in presence of static discharge: Not available.

Fire Extinguishing Media: Not applicable.

Special Information:

Fire Hazards: Sodium carbonate can ignite and burn fiercely in contact with fluoride.

Fire Hazards Sodium Carbonate in contact with fluorine decomposed at ordinary temperature with incandescence.
Explosion Hazards: Reacts explosively with red-hot aluminum metal. Sodium carbonate + ammonia in arabic gum solution will explode.

SECTION VI

SPILL/ACCIDENTAL RELEASE MEASURES

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container. If necessary: Neutralize the residue with a dilute solution of acetic acid. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill: Use a shovel to put the material into a convenient waste disposal container. Neutralize the residue with a dilute solution of acetic acid. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

SECTION VII

HANDLING AND STORAGE

Precautions: Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as acids.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Hygroscopic

SECTION VIII

EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

SECTION IX

PHYSICAL AND CHEMICAL PROPERTIES

Physical State/Appearance: Solid. (Powdered solid. Granular solid. Crystalline powder.)

Molecular Weight: 105.99 g/mole

Odor: Odorless.

Taste: Alkaline.

Color: White

pH (1% Solution in Water): 11.5 [Basic.]

Boiling Point: Not available.

Melting Point: 851°C (1563.8°F)

Critical Temperature: Not available.

Specific Gravity: Density: 2.532 (Water = 1)

Vapor Pressure (mm Hg): Not applicable.

Vapor Density (Air=1): Not available.

Volatility: Not available.

Odor Threshold: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Water/Oil Dist. Coefficient: Not available.

Ionicity (in water): Not available.

Dispersion Properties: See solubility in water.

Solubility:

Soluble in hot water.

Partially soluble in cold water.

Insoluble in acetone.

Soluble in glycerol.

Insoluble in alcohol.

Soluble in 3.5 parts water at room temperature; 2.2 parts water at 35 deg. C.

Solubility in water at 0, 10,20, and 30 deg. C is 6, 8.5, 17, and 28%, respectively.

SECTION X

STABILITY/REACTIVITY INFORMATION

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials, moisture

Incompatibilities: Reactive with acids. Slightly reactive to reactive with moisture.

Corrosivity: Non-corrosive in presence of glass.

Special Information:

On Reactivity: Hygroscopic. Combines with water with evolution of heat. Incompatible with phosphorus pentoxide, lithium, fluorine, fluoride, ammonia + silver nitrate, 2,4,6-trinitrotoluene, ammonia, acids, sodium sulfide + water, hydrogen peroxide, red hot aluminum metal, sodium sulfide, zinc, calcium hydroxide. Sodium Carbonate is decomposed by acids with effervescence. Reacts violently with F₂, Lithium, and 2,4,6-trinitrotoluene. Sodium begins to decompose at 400 C to evolve CO₂.

On Corrosivity: Hot concentrated solutions of sodium carbonate are mildly corrosive to steel.

SECTION XI

TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.

Acute oral toxicity (LD50): 4090 mg/kg [Rat].

Acute toxicity of the dust (LC50): 1200 mg/m³ 2 hours [Mouse].

Chronic Effects on Humans: May cause damage to the following organs: upper respiratory tract, skin, eyes.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of ingestion, of inhalation (lung irritant).

Special Information on Toxicity to Animals: LDL (Lowest Published Lethal Dose) [Man] - Route: Oral; Dose: 714 mg/kg

Special Information on Chronic Effects/Toxicity on Humans:

Chronic Effects: May cause adverse reproductive effects based on animal test data

Toxicity on Humans: acute Potential Health Effects:

Skin: Causes skin irritation with possible burns depending on the concentration, site (abraded or intact skin), and duration of exposure.

Eyes: Causes eye irritation and possible burns.

Concentrated solutions may cause permanent corneal injury (permanent corneal opacity).

Ingestion: Sodium carbonate ingestion may cause irritation of the digestive tract resulting in nausea, vomiting, diarrhea, thirst, abdominal pain depending on concentration and amount ingested. May also affect the cardiovascular system.

Inhalation: Dust may cause respiratory tract and mucous membrane irritation with coughing and shortness of breath (dyspnea), pulmonary edema.

Chronic Potential Health Effects:

Chronic inhalation may result in decreased pulmonary function, nasal congestion, nosebleeds, perforation of the nasal septum. Other effects of chronic exposure are skin (dermatitis and ulceration), and gastrointestinal complaints. However, the effects of chronic exposure seem to be reversible if exposure is decreased.

SECTION XII

ECOLOGICAL INFORMATION

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Information on Products of Biodegradation: Not available.

SECTION XIII

DISPOSAL CONSIDERATIONS

Waste Disposal: Recycle to process, if possible. Consult your local or regional authorities.

SECTION XIV

TRANSPORTATION INFORMATION

DOT Classification: DOT Not a DOT controlled material (United States).

UN: Not applicable.

Special Provisions for Transport: Not applicable.

SECTION XV

REGULATORY INFORMATION

Federal and State Regulations: Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities

(RQs) in 40 CFR 355 (used for SARA 302, 304, 311 and 312). Components present in this product at a level which could require reporting under the statute are: **NONE** Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual report release of toxic chemicals that appear in 40 CFR 372 (used for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material. Components present in this product at a level which could require reporting under the statute are: **NONE** Pennsylvania Right-To-Know, Hazardous substance List, Hazardous Substances and Special hazardous Substances on the list must be identified when present in products. Components present in this product at a level which could require reporting under the statute are: **NONE** Massachusetts Right-To-Know, Substance List (MSL) Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products. Components present in this product at a level which could require reporting under the statute are: **NONE** Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal or greater than the reportable quantities (RQs) in 40 CFR 302.4. Components present in this product at a level which could require reporting under the statute are: **NONE**

Other Classifications:

WHMIS (Canada): CLASS D-2B: Material causing other toxic effects (TOXIC). CLASS E: Corrosive solid.

DSCL (EEC): R36- Irritating to eyes.

Protective Equipment:

Gloves.

Lab coat.

Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Splash goggles.

References: Not available.

Other Special Considerations: Major Uses: In manufacture of sodium salts, glass, soap; for washing wool, textiles, etc.; in bleaching linen, cotton; general cleanser; in water softening; in photography; as a reagent in analytical chemistry; in aluminum production; in petroleum refining; sealing ponds from leakage; component of cleaners and detergents; catalyst in coal refining; source of soda as a fluxing agent in glass manufacturing.

The information contained herein is based on data considered to be accurate based on the material as packaged. However, no warranty is expressed regarding the accuracy of these data or the results to be obtained from the use thereof. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It is the user's obligation to determine the conditions of safe use of the product. While this MSDS is based on technical data judged to be reliable,

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