

Name:	Sodium carbonate Material Safety Data Sheet
Synonym:	Crystal carbonate; Disodium carbonate; Sal soda; Soda ash; Washing soda; Soda, calcined
CAS:	497-19-8

Section 1 - Chemical Product

MSDS Name: Sodium carbonate

Synonym: Crystal carbonate; Disodium carbonate; Sal soda; Soda ash; Washing soda; Soda, calcined.

Section 2 - COMPOSITION, INFORMATION ON INGREDIENTS

CAS#	Chemical Name	content	EINECS#
497-19-8	Sodium carbonate anhydrous	100	207-838-8

Hazard Symbols: XI

Risk Phrases: 36

Section 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Irritating to eyes. Hygroscopic (absorbs moisture from the air).

Potential Health Effects

Eye:

May result in corneal injury. Contact with eyes may cause severe irritation, and possible eye burns.

Skin:

Contact with skin causes irritation and possible burns, especially if the skin is wet or moist.

Ingestion:

May cause irritation of the digestive tract.

Inhalation:

Harmful if inhaled. May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema.

Chronic:

Prolonged or repeated inhalation may cause nosebleeds, nasal congestion, erosion of the teeth, perforation of the nasal septum, chest pain and bronchitis.

Section 4 - FIRST AID MEASURES

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

Skin:

Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion:

Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water.

Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician:

Section 5 - FIRE FIGHTING MEASURES

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Runoff from fire control or dilution water may cause pollution.

Extinguishing Media:

Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Section 6 - ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions.

Provide ventilation.

Section 7 - HANDLING and STORAGE

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse.

Use with adequate ventilation. Minimize dust generation and accumulation. Do not get in

eyes, on skin, or on clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage:

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls:

Good general ventilation should be sufficient to control airborne levels. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Exposure Limits CAS# 497-19-8: Russia: 5 mg/m³ TWA Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to minimize contact with skin.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Powder

Color: white

Odor: odorless

pH: 11.6 (solution)

Vapor Pressure: Not available.

Viscosity: Not available.

Boiling Point: 1600 deg C

Freezing/Melting Point: 851 deg C

Autoignition Temperature: Not available.

Flash Point: Not applicable.

Explosion Limits, lower: Not available.

Explosion Limits, upper: Not available.

Decomposition Temperature: 400 deg C

Solubility in water: Soluble.

Specific Gravity/Density: 2.53

Molecular Formula: Na₂CO₃

Molecular Weight: 105.99

Section 10 - STABILITY AND REACTIVITY

Chemical Stability:

Stable at room temperature in closed containers under normal storage and handling conditions. Decomposed by acids with effervescence, evolution of carbon dioxide.

Conditions to Avoid:

Dust generation, excess heat, moist air.

Incompatibilities with Other Materials:

Reacts explosively with red-hot aluminum metal. Incompatible with ammonia + silver nitrate, 2,4-dinitrotoluene, 2,4,6-trinitrotoluene, sulfuric acid, sodium sulfide + water, lithium, phosphorus pentoxide, fluorine, and hydrogen peroxide. Hot concentrated solutions of sodium carbonate are mildly corrosive to steel.

Hazardous Decomposition Products:

Carbon dioxide, toxic fumes of sodium oxide.

Hazardous Polymerization: Has not been reported.

Section 11 - TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 497-19-8: VZ4050000 LD50/LC50:

CAS# 497-19-8: Draize test, rabbit, eye: 100 mg/24H Moderate; Draize test, rabbit, eye: 50 mg Severe; Draize test, rabbit, skin: 500 mg/24H Mild; Inhalation, mouse: LC50 = 1200 mg/m³/2H; Inhalation, rat: LC50 = 2300 mg/m³/2H; Oral, mouse: LD50 = 6600 mg/kg; Oral, mouse: LD50 = 6600 mg/kg; Oral, rat: LD50 = 4090 mg/kg.

Carcinogenicity:

Sodium carbonate anhydrous - Not listed by ACGIH, IARC, or NTP.

Other:

See actual entry in RTECS for complete information.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity:

Fish: Bluegill/Sunfish: LC50 = 320 mg/L; 96 Hr.; Static Conditions

Section 13 - DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - TRANSPORT INFORMATION

IATA

Shipping Name: Not regulated.

Hazard Class:

UN Number:

Packing Group:

IMO

Shipping Name: Not regulated.

Hazard Class:

UN Number:

Packing Group:

RID/ADR

Shipping Name: Not regulated.

Hazard Class:

UN Number:

Packing group:

Section 15 - REGULATORY INFORMATION

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:

R 36 Irritating to eyes.

Safety Phrases:

S 22 Do not breathe dust.

S 26 In case of contact with eyes, rinse immediately
with plenty of water and seek medical advice.

WGK (Water Danger/Protection)

CAS# 497-19-8: 1

Canada

CAS# 497-19-8 is listed on Canada's DSL List.

CAS# 497-19-8 is listed on Canada's Ingredient Disclosure List.

US FEDERAL

TSCA

CAS# 497-19-8 is listed on the TSCA inventory.