

Sodium carbonate SDS/MSDS (Safety Data Sheet)

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

* Product Name: Sodium carbonate

* Catalog Number: S4828

* CAS Number: 497-19-8

* IUPAC Name: Carbonic acid sodium salt (1:2)

Relevant identified uses and uses advised against

* Identified uses: For research and development use only; laboratory chemicals; manufacture of substances.

* Uses advised against: Not for pharmaceutical, household, or other unapproved uses.

Details of the supplier

* Company: Selleck Chemicals

* TollFree: +1 877 796-6397

* Tel: +1 832 582-8158

* Fax: +1 832 582-8590

Emergency telephone number

* Emergency phone #: +1 832 582-8158

2. HAZARDS IDENTIFICATION

2.1 GHS classification in accordance with 29 CFR 1910 (OSHA HCS):

Aspiration hazard: Category 1. H304

Serious eye damage: Category 1. H318

Serious eye irritation: Category 2. H319

Acute toxicity (inhalation): Category 4. H332

Specific target organ toxicity (single exposure): Category 3. H335

Specific target organ toxicity (single exposure): Category 3. H336

Specific target organ toxicity (single exposure): Category 1. H370

2.2 GHS Label elements, including precautionary statements

Hazard Pictogram(s)



Signal Word

Danger

Hazard statement(s)

H304: May be fatal if swallowed and enters airways
H318: Causes serious eye damage
H319: Causes serious eye irritation
H332: Harmful if inhaled
H335: May cause respiratory irritation
H336: May cause drowsiness or dizziness
H370: Causes damage to organs

Precautionary statement(s)	None.
Prevention	P260: Do not breathe dust/fume/gas/mist/vapors/spray. P261: Avoid breathing dust/fume/gas/mist/vapors/spray. P264: Wash hands thoroughly after handling. P264+P265: Wash hands thoroughly after handling. Do not touch eyes. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area. P280: Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
Response	P301+P316: IF SWALLOWED: Get emergency medical help immediately. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351: IF IN EYES: Rinse cautiously with water for several minutes. P305+P354: IF IN EYES: Immediately rinse with water for several minutes. P308+P316: IF exposed or concerned: Get emergency medical help immediately. P317: Get emergency medical help. P319: Get medical help if you feel unwell. P321: Specific treatment (see information on this label and safety datasheet)). P331: Do NOT induce vomiting. P337+P317: If eye irritation persists: Get medical help. P338: Remove contact lenses, if present and easy to do. Continue rinsing.
Storage	P403+P233: Store in a well-ventilated place. Keep container tightly closed. P405: Store locked up.
Disposal	P501: P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Product name: Sodium carbonate

CAS Number: 497-19-8

PubChem CID: 10340

Molecular formula: CNa₂O₃

Molecular weight: 105.988 g/mol

IUPAC name: disodium;carbonate

3.2 Mixtures

Not applicable (pure substance).

4. FIRST-AID MEASURES

4.1 Description of first aid measures

Inhalation: Fresh air, rest.

Skin contact: Rinse skin with plenty of water or shower.

Eye contact: First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Ingestion: Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention .

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 (Toxicological Information).

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Contact a poison control center or physician for severe exposure.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable: Water spray, dry chemical, carbon dioxide (CO₂), alcohol-resistant foam.

Unsuitable: None known.

5.2 Specific hazards arising from the substance or mixture

In case of fire in the surroundings, use appropriate extinguishing media.

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

5.3 Advice for firefighters

Wear self-contained breathing apparatus (SCBA) and full protective clothing.

Fight fire from upwind. Cool containers with water spray until fire is extinguished.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear appropriate personal protective equipment (see Section 8).

Avoid breathing dust/vapor. Ensure adequate ventilation.

Evacuate personnel to safe areas. Keep people away from and upwind of spill.

6.2 Environmental precautions

Prevent product from entering drains, waterways, or soil.

Contain spill with inert absorbent material.

6.3 Methods and materials for containment and cleaning up

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance, safety goggles and protective gloves. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Wash away remainder with plenty of water.

ACCIDENTAL RELEASE MEASURES: Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust. Environmental precautions: Do not let product enter drains. Methods and materials for containment and cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SRP: Recycle any unused portion of the material for its approved use or return it to the manufacturer or supplier.

Ultimate disposal of the chemical must consider: the material's impact on air quality; potential migration in air, soil or

water; effects on animal, aquatic and plant life; and conformance with environmental and public health regulations. If it is possible or reasonable use an alternative chemical product with less inherent propensity for occupational harm/injury/toxicity or environmental contamination.

Product Offer: Surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Contaminated packaging: Dispose of as unused product.

ACCIDENTAL RELEASE MEASURES: Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust. Environmental precautions: Do not let product enter drains.

Precautions for safe handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.

Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

For more Preventive Measures (Complete) data for Sodium carbonate (7 total), please visit the HSDB record page.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Dry. Well closed. Separated from incompatible materials. See Chemical Dangers.

Keep container tightly closed in a dry and well-ventilated place. Hygroscopic. Keep in a dry place. Storage class (TRGS 510): Non Combustible Solids.

Calcined soda ash is hygroscopic, gradually taking up moisture and carbon dioxide during transportation and storage. This converts the surface of sodium carbonate to the bicarbonate and leads to a weight increase of up to 17%. Soda ash is therefore best stored in closed, dry areas.

Keep well closed.

It migrates to food from packaging materials.

7.2 Conditions for safe storage, including any incompatibilities

Dry. Well closed. Separated from incompatible materials. See Chemical Dangers.

Keep container tightly closed in a dry and well-ventilated place. Hygroscopic. Keep in a dry place. Storage class (TRGS 510): Non Combustible Solids.

Calcined soda ash is hygroscopic, gradually taking up moisture and carbon dioxide during transportation and storage. This converts the surface of sodium carbonate to the bicarbonate and leads to a weight increase of up to 17%. Soda ash is therefore best stored in closed, dry areas.

Keep well closed.

It migrates to food from packaging materials.

Store away from incompatible materials (see Section 10).

[Note: Specific storage temperature not available in public databases. Refer to supplier Certificate of Analysis (COA) for exact storage conditions.]

Store in original container. Keep upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure controls

8.1.1 Occupational exposure limits (OEL)

OSHA PEL: Not established.

ACGIH TLV: Not established.

NIOSH REL: Not established.

No occupational exposure limit values are established for this substance.

Use the lowest feasible exposure level (ALARA principle).

8.1.2 Appropriate engineering controls

Use only in a chemical fume hood or with local exhaust ventilation.

Ensure adequate ventilation to keep airborne concentrations below exposure limits.

8.2 Individual protection measures

8.2.1 Eye/face protection

Wear chemical safety goggles and face shield.

8.2.2 Skin protection

Wear protective gloves. Recommended material: Nitrile rubber.

Wear suitable protective clothing (lab coat).

8.2.3 Respiratory protection

Use NIOSH-approved dust/mist respirator (N95 or higher) if ventilation is inadequate.

8.2.4 Thermal hazards

Not applicable.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance: Dry Powder; Other Solid; Large Crystals; CBI; Dry Powder; Large Crystals; Liquid; Wet Solid; Other Solid; Liquid; Dry Powder; Liquid; Liquid; Other Solid

b) Odor: Odorless

c) Odor threshold: No data available

d) pH: Aqueous solutions are strongly alkaline. At 25 °C, the pH of 1, 5 and 10 wt% sodium carbonate solutions are 11.37, 11.58 and 11.70, respectively.

e) Melting point/freezing point: 856 °C

f) Initial boiling point and boiling range: Decomposes on heating by CO₂ loss

g) Flash point: No data available

h) Evaporation rate: No data available

i) Flammability (solid, gas): No data available

j) Upper/lower flammability or explosive limits: No data available

k) Vapor pressure: No data available

l) Vapor density: No data available

m) Relative density: 2.54 g/cu cm

n) Water solubility: Freely soluble in water. Insoluble in ethanol

o) Partition coefficient: n-octanol/water: Log P: No data available

p) Auto-ignition temperature: No data available

q) Decomposition temperature: No data available

- r) Viscosity: No data available
- s) Explosive properties: No data available
- t) Oxidizing properties: No data available

9.2 Other information

Topological Polar Surface Area (TPSA): 63.2 Å²
Complexity: 18

10. STABILITY AND REACTIVITY

10.1 Reactivity

No specific reactivity hazards identified under normal handling conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions under normal conditions.

10.4 Conditions to avoid

Avoid heat, sparks, open flames, direct sunlight, and moisture.
Avoid strong oxidizing agents, strong acids, and strong bases.

10.5 Incompatible materials

The anhydrous reaction of sodium carbonate & phosphorus pentoxide, initiated by local heating, can generate relatively high temp.
Decomposition by acids with effervescence; combines with water with evolution of heat.
When sodium carbonate was applied to red hot aluminum, an explosion occurred.
Stratified concentrated sulfuric acid in a reaction tank was suddenly contacted by alkali wash. The violent ensuing reaction caused a geyser of material, propelled by carbon dioxide and steam, to shoot from the manhole of the tank.
For more Hazardous Reactivities and Incompatibilities (Complete) data for Sodium carbonate (8 total), please visit the HSDB record page.

10.6 Hazardous decomposition products

Thermal decomposition may produce: Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NO_x).
See also Section 5 (Fire-fighting measures) for combustion products.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

No acute toxicity data available.

Skin corrosion/irritation:

No data available.

Serious eye damage/eye irritation:

Causes serious eye damage (H318).

Respiratory or skin sensitization:

No data available.

Germ cell mutagenicity:

No data available.

Carcinogenicity:

No data available.

Reproductive toxicity:

No data available.

Specific target organ toxicity (single exposure):

H370

Specific target organ toxicity (repeated exposure):

No data available.

Aspiration hazard:

May be fatal if swallowed and enters airways (H304).

11.2 Additional information

Exposure routes:

The substance can be absorbed into the body by inhalation of dust.

Signs and symptoms of exposure:

Cough.

Redness.

Redness. Pain.

Sore throat. Nausea. Abdominal pain.

Data source: Hazardous Substances Data Bank (HSDB) via PubChem.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

LC50; Species: *Lepomis macrochirus* (Bluegill) length 5.3-7.2 cm, weight 3.5-3.9 g; Conditions: freshwater, static, 18-20 °C, hardness 10 mg/L CaCO₃, dissolved oxygen 5-9 mg/L; Concentration: 320000 ug/L for 96 hr /technical/

LC50; Species: *Pimephales promelas* (Fathead Minnow) age 1-7 days; Conditions: freshwater, static, 25 °C, pH 7.5-9.0, dissolved oxygen >40%; Concentration: 4850000 ug/L for 24 hr (95% confidence interval: 3540000-6160000 ug/L) /technical/

LC50; Species: *Pimephales promelas* (Fathead Minnow) age 1-7 days; Conditions: freshwater, static, 25 °C, pH 7.5-9.0, dissolved oxygen >40%; Concentration: 2500000 ug/L for 48 hr (95% confidence interval: 950000-4060000 ug/L) /technical/

LC50; Species: *Pimephales promelas* (Fathead Minnow) age 1-7 days; Conditions: freshwater, static, 25 °C, pH 7.5-9.0, dissolved oxygen >40%; Concentration: 850000 ug/L for 96 hr (95% confidence interval: 310000-1220000 ug/L) /technical/

For more Ecotoxicity Values (Complete) data for Sodium carbonate (8 total), please visit the HSDB record page.

/AQUATIC SPECIES/ The natural habitat of sponge, *Eunapius carteri* faces an ecotoxicological threat of contamination by washing soda, a common household cleaning agent of India. Washing soda is chemically known as sodium carbonate and is reported to be toxic to aquatic organisms. Domestic effluent, drain water and various human activities in ponds and lakes have been identified as the major routes of washing soda contamination of water. Phagocytosis

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available.

12.6 Other adverse effects

No other adverse ecological effects identified.

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

Waste Treatment Methods: Waste material must be disposed of in accordance with national and local regulations. Leave chemicals in original containers and do not mix with other waste. Handle uncleaned containers in the same manner as the product itself.

14. TRANSPORT INFORMATION**14.1 UN number**

Not regulated as dangerous goods (research quantities typically exempt).

14.2 UN proper shipping name

Not subject to transport regulations (small quantities for research use).

14.3 Transport hazard class(es)

Not classified as dangerous goods for transport (research quantities).

14.4 Packing group

Not applicable (not regulated as dangerous goods in typical research quantities).

14.5 Environmental hazards

Marine pollutant: No (not classified as environmentally hazardous per GHS).

14.6 Special precautions for user

Transport in original packaging. Ensure containers are tightly sealed.

For bulk or commercial quantities, consult applicable transport regulations (DOT, IATA, IMDG).

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

US EPA / TSCA: Subject to EPA TSCA regulations

EU ECHA / REACH: Registered (REACH Active)

SARA 302 Components:

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components:

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards:

Acute (short-term) health hazard

Massachusetts Right To Know Components:

This material contains components subject to the Massachusetts Right to Know Act. See Section 2 for hazard classification.

Pennsylvania Right To Know Components:

This material contains components subject to the Pennsylvania Right to Know Act. See Section 2 for hazard classification.

New Jersey Right To Know Components:

This material contains components subject to the New Jersey Right to Know Act. See Section 2 for hazard classification.

California Prop. 65 Components:

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Other regulatory listings:

- The Australian Inventory of Industrial Chemicals: Chemical: Carbonic acid, disodium salt
- EFSA Legal Basis: Regulation (EC) No 1831/2003 (amended)
- Status Regulation (EC): 2004/129/EC
- FIFRA Requirements: An exemption from the requirement of a tolerance is established for residues of sodium carbonate.

The Agency has completed its assessment of the dietary, residential, occupational and ecological risks associated with the use of pesticide products containing the active ingredient sodium carbonate. Ba

- FDA Requirements: Substance added directly to human food affirmed as generally recognized as safe (GRAS).

Sodium carbonate used as a general purpose food additive in animal drugs, feeds, and related products is generally recognized as safe when used in accordance with good manufacturing or feeding practice.

Drug prod

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for this substance.

For research-use-only compounds, no CSA is required under REACH Annex I.

16. OTHER INFORMATION

Revision Date: 2026/09/09

Further Information: The information provided is believed to be correct but is not exhaustive and should be used only as a guideline based on current knowledge. It does not represent a guarantee of the properties of the product.

Selleck Chemicals Corporation and its Affiliates shall not be held liable for any damage resulting from handling or

contact with the product.