

Product Safety Summary

Sodium Carbonate (Soda Ash)

CAS No. 497-19-8

This Product Safety Summary is intended to provide a general overview of the chemical substance. The information on the summary is basic information and is not intended to provide emergency response information, medical information or treatment information. The summary should not be used to provide in-depth safety and health information. In-depth safety and health information can be found on the Material Safety Data Sheet (MSDS) for the chemical substance.

Names

- Sodium carbonate
- Soda salt
- Disodium carbonate
- Soda ash
- Soda crystal
- Washing soda

Product Overview

Sodium carbonate is a white, granular or powdered solid. It is used primarily to make glass (flat glass and bottles), fiberglass and detergents, as well as for water softening and pH adjustment. It is also used in the manufacture of other chemicals.

Solvay Chemicals, Inc. does not sell sodium carbonate directly to consumers. Consumers may be exposed to sodium carbonate in many consumer product applications where the sodium carbonate is not transformed or reacted and is present in powder or granule form.

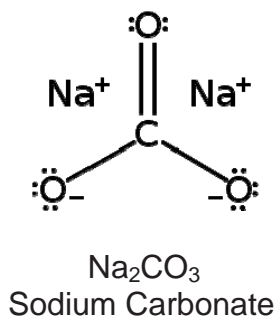
Exposure to sodium carbonate, especially powder, can cause irritation to the skin, eyes, and respiratory tract.

Manufacture of Product

- Solvay Chemicals, Inc.'s production facility is located near Green River, Wyoming.



- Solvay Chemicals, Inc. manufactures sodium carbonate by extracting trona ore (natural trisodium hydrogendicarbonate dihydrate) from deep underground. The trona is calcined (removing carbon dioxide), purified and crystallized into its final form.



Product Description

Sodium carbonate (Na_2CO_3) is manufactured and sold as a white, odorless powder or granules. Typical physical properties are provided in Table 1.

Table 1: Typical physical properties of Sodium Carbonate

| | |
|----------------------------|---|
| Melting Point | 1564° F (851° C) |
| Bulk Density | 56-66 lbs./ft ³ (900-1050 kg/m ³) |
| Flash point | Non- flammable |
| Solubility in water | 71 g/L @ 32° F (0° C) 215 g/L @ 68° F (20° C) |
| pH | 11.1 4.06 g/L @ 77° F (25° C) |

Product Uses

The majority of sodium carbonate produced in the United States is used by the glass industry, detergent industry or in manufacturing other chemicals. Other uses include environmental applications such as pH control. A small amount of more highly purified sodium carbonate is used in food and pharmaceutical applications.

Exposure Potential

Workplace exposure - Exposures can occur at a sodium carbonate (soda ash) manufacturing facility or a manufacturing, packaging or storage facility that handles soda ash. Exposure may also occur in the event of a transportation incident. Persons involved in maintenance, sampling and testing activities, or in the loading and unloading of sodium carbonate containers are at greater risk of exposure. Following good industrial hygiene practices will minimize the likelihood of sodium carbonate exposure; however, persons involved in higher risk activities should always wear proper personal protective equipment such as protective gloves, goggles and a hard hat. In instances where the potential for dusting is high, proper respiratory protection should also be worn.

- **Consumer exposure to products containing sodium carbonate** - Although Solvay Chemicals, Inc. does not sell sodium carbonate directly to consumers, some of its uses are in consumer products such as laundry detergents. The user should always use these products in strict compliance with the manufacturer's use and/or label instructions.
- **Environmental releases** - Spills of sodium carbonate should be contained and isolated from waterways and sewers or drains. Spills should be swept up and placed in a compatible container. Any residue that cannot be swept up should be diluted with large amounts of water. Dispose of waste or residues in accordance with applicable local, state or federal regulations. Persons attempting to clean up sodium carbonate spills should wear proper personal protective equipment (See guidelines in the Workplace exposure section of this document or the [Material Safety Data Sheet](#)).
- **Fires** – Sodium carbonate is not flammable or combustible. Fires that occur in the presence of sodium carbonate should be extinguished using means appropriate to the surroundings.

For additional information concerning sodium carbonate emergency response procedures, please consult the [Material Safety Data Sheet](#).

Health Information

Sodium carbonate typically found in consumer products may pose a risk of symptoms due to skin or inhalation exposure. Sodium carbonate can produce the following adverse health affects:

- **Contact** - Skin exposures can cause symptoms ranging from minor skin irritation or itching to redness and swelling. Eye exposure to sodium carbonate may result in redness, tearing or severe eye irritation. In severe exposures, irreversible eye damage may result.
- **Inhalation** - The inhalation of sodium carbonate dusts can cause nose and throat irritation or coughing. Repeated or prolonged exposures may cause sore throat or nosebleeds.
- **Ingestion** - The ingestion of sodium carbonate may cause severe irritation of the mouth and throat, nausea, vomiting, abdominal irritation and diarrhea.
- **Other Effects** - The International Agency for Research on Cancer (IARC) has not classified sodium carbonate as a carcinogen (cancer causing).

For more information on health effects and routes of exposure, or for information concerning proper first aid measures, please consult the [Material Safety Data Sheet](#).

Environmental Information

Sodium carbonate is not considered to be environmentally hazardous or toxic.

For more ecological and environmental information concerning this product, please consult the [Material Safety Data Sheet](#).

Physical Hazard Information

For more information concerning the physical hazards of this product, please consult the [Material Safety Data Sheet](#).

Regulatory Information

Regulations may exist that govern the manufacture, sale, transportation, use and/or disposal of this chemical. These regulations can vary by city, state, country or geographic region. Information may be found by consulting the relevant [Material Safety Data Sheet](#) specific to your country or region.

Additional Information

- Solvay America, Inc. www.solvaynorthamerica.com
- Solvay Chemicals, Inc. www.solvaychemicals.us
- Solvay Chemicals, Inc. Material Safety Data Sheets
www.solvaychemicals.us/EN/Literature/LiteratureDocuments.aspx
- Contact Solvay Chemicals, Inc. solvaychemicals.us@solvay.com
- This summary was prepared in November, 2010.

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