

Safety Data Sheet

1. Chemical product and company identification

Product name : Sodium carbonate

Company information

Name of manufacturer : KANTO CHEMICAL CO., INC.
 Address : 2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, JP
 Name of section : Business Administration Department, Reagent Division
 Telephone number : +81-3-6214-1090
 Facsimile number : +81-3-3241-1047
 Mail address : BC32@kanto.co.jp
 Reference No : 37141

Recommended use : For research use only

Restrictions on use : Seek expert judgment when using the product for applications other than those recommended.

2. Hazards identification

GHS classification

Health hazards	Acute toxicity (inhalation:dust/mist)	Category 4
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity (single exposure)	Category 3 (narcosis)
	Specific target organ toxicity (single exposure)	Category 3 (respiratory tract irritation.)

Hazard pictograms



Signal word : Danger

Hazard statements : Causes serious eye damage
 Harmful if inhaled
 May cause respiratory irritation
 May cause drowsiness or dizziness

Precautionary statements

Prevention : Avoid breathing dust.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves/protective clothing/eye protection/face protection.

Response : IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Immediately call a POISON CENTER or doctor.
 Call a POISON CENTER or doctor if you feel unwell.

- Storage : Store in a well-ventilated place. Keep container tightly closed. Store locked up.
- Disposal : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

3. Composition/information on ingredients

- Distinction of substance or mixture : Substance
- Synonyms : Soda ash

Chemical name	Concentration (%)	Formula	TSCA	EC-No.	CAS RN
Sodium carbonate	≥ 99	CNa2O3	Listed	207-838-8	497-19-8

4. First aid measures

First aid measures

- First-aid measures after inhalation : Remove the victim to fresh air, and make him blow his nose and gargle. If necessary, get medical treatment.
- First-aid measures after skin contact : Wash the affected areas under running water.
- First-aid measures after eye contact : Wash the affected areas under running water for at least 15 minutes. Get medical treatment.
- First-aid measures after ingestion : Give the victim water. If necessary, get medical attention.
- Personal Protection in First Aid and Measures : Rescuers should wear proper protective equipment like rubber gloves, goggles.

5. Fire fighting measures

- Suitable extinguishing media : This product is noncombustible.
- Unsuitable extinguishing media : None
- Firefighting instructions : Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.
- Personal protection (Emergency response) : Wear breathing apparatus.

6. Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures

- General measures : Wear proper protective equipment and avoid contact with skin and inhalation of dust. Conduct operations from upwind and evacuate people downwind.

Environmental precautions

- Environmental precautions : Attention should be given to avoid damage to the environment by flowing of spillage to rivers.

Methods and Equipment for Containment and Cleaning up

- For containment : Sweep up in a chemical waste container. Flush contaminated area



with copious amounts of water.

7. Handling and storage

Handling

- Technical measures : Wear appropriate protective equipment to avoid contact with skin or inhalation of dust.
- Precautions for safe handling : Avoid formation of dust and aerosols.
Do not allow contact with acids.

Storage

- Storage conditions : As the chemical is deliquescent, keep the bottle tightly closed and store in a cool place.
- Material used in packaging/containers : Glass, polyethylene, polypropylene.

8. Exposure controls / Personal protection equipment

ACGIH TWA	Not established
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- Appropriate engineering controls : Install a local ventilation system in case of dusty condition.

Protective equipment

- Respiratory protection : Dust mask
- Hand protection : Impervious protective gloves
- Eye protection : Safety goggles
- Skin and body protection : Protective clothing, protective boots

9. Physical and chemical properties

- Physical state : Solid
- Color : White
- Odor : Odorless
- pH : 11.7 (25°C, 10% aqueous solution)
- Melting point : 851 ° C
- Freezing point : No data available
- Boiling point : No data available
- Flash point : No data available
- Auto-ignition temperature : No data available
- Decomposition temperature : ≥ 400 ° C (Generates carbon dioxide gas)
- Flammability : Non flammable.
- Vapor pressure : No data available
- Relative density : No data available
- Density : 2.5 g/cm³
- Relative gas density : No data available
- Solubility : Organic solvents: Insoluble in ethanol, ether, poorly soluble in acetone.
Water: 30 g/100mL (20°C)
- Partition coefficient n-octanol/water (Log Pow) : No data available



Explosive limits (vol %) : No data available
Viscosity, kinematic : No data available
Particle characteristics : No data available

10. Stability and reactivity

Reactivity : Reacts with acids to produce carbon dioxide.
Chemical stability : Stable under normal conditions. Absorbs carbon dioxide from the air and converts to sodium bicarbonate.
Deliquescent.
Decomposes at 400° C to produce carbon dioxide.
Possibility of hazardous reactions : Stable under normal conditions of use.
Conditions to avoid : Light, heat, moisture.
Incompatible materials : Acids.
Hazardous decomposition products : Carbon monoxide, sodium oxide.

11. Toxicological information

Acute toxicity (oral) : No classification
rat LD50=2800 mg/kg
Acute toxicity (dermal) : No classification
rabbit LD50>2000 mg/kg
Acute toxicity (inhalation) : No classification (gas)
Classification not possible (vapor)
Harmful if inhaled (dust, mist)
rat LC50=1.2 mg/L/4h
Skin corrosion/irritation : No classification
In 4- and 24-hour dermal administration tests using rabbits, scores for erythema and edema were 0, indicating that the substance was not irritating. Similarly, in 4-hour patch tests with humans, scores for erythema and edema were 0, concluding that the substance was not irritating. In the case of both rabbits and humans on which the substance was applied onto damaged skin, the primary irritation index was ≥ 2 , indicating that the substance was slightly irritating. Therefore, it was classified as "No classification".
Serious eye damage/irritation : Causes serious eye damage
The rabbit tests have yielded inconsistent results in that the substance was found to be not irritating and highly irritating. In one of the tests, symptoms of the corneas, irises, and conjunctivas (redness and chemosis) developed in all of the cases in which the eyes were not washed after the application. These symptoms remained unrecoverable 14 days after the application, and were quantified by the maximum mean total Draize score (MMTS) of 105. Yet, in another rabbit test in which the eyes were not washed after the application, severe cases of corneal clouding were observed 1 hour after the exposure and these symptoms continued for 7 days. The average Draize scores were 3.8 for corneas and 2 for irises, and corneal pannus and keratoconus occurred in some of the treated animals. These results revealed that the substance caused serious and irreversible eye damage, and thus it was classified into category 1. Its pH = 11.58 (5 wt% aqueous sol. at 25degC).
Respiratory sensitization : Classification not possible
Skin sensitization : Classification not possible
Germ cell mutagenicity : Classification not possible



Carcinogenicity	:	Classification not possible
Reproductive toxicity	:	Classification not possible In oral administration tests using rats, mice and rabbits during the organogenetic period, no toxic effects were found on maternal animals and the development of offspring including teratogenicity. However, since there was no data on the reproductive functions and fertility of parental animals, classification is not possible.
STOT-single exposure	:	May cause drowsiness or dizziness May cause respiratory irritation In the tests using rats, mice, and guinea pigs, symptoms of respiratory disorder such as dyspnoea and wheezing were observed immediately after the inhalation exposure and they disappeared after 3-4 hours. Based on these results, the substance was classified into category 3 (respiratory tract irritation). In oral administrations to rats, symptoms such as motor ataxia, prostration, and lethargy were observed, and they disappeared 5 days after the administration among surviving rats. In dermal administrations, although lethargy was observed 24 hours after the administration, no mortality occurred. Since these symptoms observed were recoverable, the substance was classified into category 3 (narcosis).
STOT-repeated exposure	:	Classification not possible
Aspiration hazard	:	Classification not possible

12. Ecological information

Ecotoxicity

Aquatic acute	:	No classification Daphnia magna EC50=250 mg/L/48h
Aquatic chronic	:	No classification

Persistence and degradability

No additional information available

Bioaccumulative potential

No additional information available

Mobility in soil

No additional information available

Hazardous to the ozone layer

Ozone	:	Classification not possible
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13. Disposal considerations

Ecology - waste materials	:	Dilute the chemical with a large amount of water and neutralize with dilute acid, then flush in a drain. Or entrust approved waste disposal companies with the disposal. *Note that carbon dioxide is produced during neutralization.
Contaminated container and packaging	:	In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

International Regulations

Transport by sea (IMDG)

UN-No. (IMDG) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Packing group (IMDG) : Not applicable
Transport hazard class(es) (IMDG) : Not applicable

Air transport (IATA)

UN-No. (IATA) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Packing group (IATA) : Not applicable
Transport hazard class(es) (IATA) : Not applicable
Marine pollutant : Not applicable

15. Regulatory information

Regulatory information with regard to this substance in your country or region should be examined by your own responsibility.

16. Other information

Data sources : Encyclopaedia Chimica, Kyoritsu Shuppan Co, Ltd. (1963) .
ICSC Card (2009) .
NITE Chemical Risk Information Platform (NITE-CHRIP), National Institute of Technology and Evaluation.
Classification according to Classification, Labelling and Packaging of Substances and Mixtures (SEA) Regulation published in the Official Journal numbered 28848 on December 11, 2013.

The information contained herein is based on several references and the present state of our knowledge. However the SDS does not always cover all information about the product, handle the product carefully. The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements. The information herein is only provision of information, and it does not represent a guarantee the properties of the product. The Safety Data Sheet (SDS) is prepared based on JIS Z7253.

