

Material Safety Data Sheet

Soda Ash (Sodium Carbonate)

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

Product identifier

Name of the Product:

SODIUM CARBONATE

Also Known As:

SODA ASH

EC Number:

207-838-8

EC Name:

Sodium Carbonate

CAS Number:

497-19-8

CAS Name:

Sodium Carbonate

IUPAC Name:

Disodium Carbonate

REACH Registration No.:

01-2119485498-19-0025

Relevant identified uses of the substance of the mixture and uses which are not advised

Flux agents for casting; Intermediated; Agents absorbing and adsorbing gases or liquids; Laboratory chemicals; Processing aid; not otherwise listed; pH regulating AGENTS; Food/feedstuff additives; Pharmaceutical substances.

Uses advised against are not identified.

Overview on exposure scenarios and coverage of substance life cycle is provided in Appendix 1.

2. IDENTIFICATION OF THE HAZARDS

Classification of the substance:

Classification according to CLP:

Sodium carbonate is currently listed in Annex VI of Regulation (EC) No. 1272/2008 (Index Number: 011-005-00-02) and classified:

For physical – chemical properties:

Not classified

For health effects:

Eye irritation 2

For the environment:

Not classified

Classification according to DSD:

Sodium carbonate is currently listed in Annex I of Directive 67/548/EEC (Index number: 011-005-00-2) and classified:

For physical – chemical properties:

Not classified

For health effects:

Xi, R36

For the environment:

Not classified

Label elements:

Labeling according to CLP

Signal word:

Warning

Hazard pictogram:

GHS07 exclamation mark



Hazard statement: H319 –causes serious eye irritation

The precautionary statements associated to H319 according to Annex 1 of the CLP Regulation, are:

P264	Wash the eye thoroughly after handling
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and continue rinsing
P337+P313	If eye irritation persists: get medical advice/attention

Labelling according to DSD (Dangerous Substances Directive)

Pictogram:



Indication of danger: Xi – irritant

R-phrases: 36 irritating to eyes

S-phrases: (2)-22-26
S2- Keep out of the reach of children
S 22 – Do not breathe the dust of the product
S 26 – In case of contact with eyes, rinse them immediately with plenty of water and seek medical advice.

FIRST AID MEASURES

Description of first aid measures

Inhaled: Move to fresh air. If symptoms persist, call a physician.
Skin contact: Remove and wash contaminated clothing before re-use. Wash off with soap and water. If symptoms persist, call a physician.
Eye contact: Wash immediately with abundant water during 15 minutes keeping eyes well open – remove contact lenses and seek medical attention.
Ingested: Rinse mouth with water. Do NOT induce vomiting. If symptoms persist seek immediate medical attention.

Most important symptoms and effects, both acute and delayed

Reddening and irritation. Laxative effect in large doses. In case of discomfort, seek medical attention.

3. FIREFIGHTING MEASURES

Extinguishing media:

Special hazards arising from the substance or mixture:

Advice for firefighters:

All possible extinguishing media can be used.

The product is not considered as flammable. But under the effects of heat, it may emit toxic gases. Respiratory protection, eye protection, boots and gloves.

4. ACCIDENTAL RELEASE MEASURES

Personal precautions, protection equipment and emergency procedures:

Avoid dust formation. Avoid contact with eyes. Contain the contaminated area and restrict access to unauthorized persons.

Environmental precautions:

Prevent spillage from entering the sewer system or in the water flows. If not possible, dilute with water. Prevent any mixture with an acid into the sewer/drain (gas formations).

Methods and material for containment and cleaning up:

Recovery:	Collect the product using suitable media (broom, vacuum cleaner; shovel)
Cleaning:	Place the spilt product in a suitable container and label it correctly
Disposal:	Disposal of the material or solid waste at an authorized centre

Reference to other sections:

For more information, see Section 8 and 13.

5. HANDLING AND STORAGE:

Precautions for safe handling

Technical measures:	No particular technical intervention is required
Precautions:	Avoid the formation or dispersion of dust into the atmosphere. Ensure adequate ventilation. Keep away from incompatible products.
Usage recommendation:	Respect the usage instructions

Conditions for safe storage, including any incompatibilities

Technical measures:	Keep properly labelled containers sealed and stored in dry areas.
Incompatible substances:	Keep away from incompatible products.
Packaging conditions:	The product can be stored in common commercial containers.
Maximum quantities that can be stored:	Not applicable.
Packaging materials:	Plastic material (polythylene, polypropylene) Woven plastic material + PE.
Unsuitable packaging:	Material moisture permeable.

6. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Maximum permissible exposure limits:

Industrial DNEL(s)

DNEL acute, systemic	-	can not be assessed
DNEL long term , systemic	-	can not be assessed
DNEL local for oral effect	-	can not be assessed
DNEL local for dermal effect	-	can not be assessed
DNEL acute local effect if inhaled-	-	can not be assessed
DNEL long term, local if inhaled	-	can not be assessed
DNEL by effecting the eyes	-	can not be assessed

National permissible exposure limit on-site (OEL)

OEL = 10mg/m₃

Predicted No-Effect Concetration (PNEC)

PNEC sediment	-	can not be estimated
PNEC terrestrial	-	can not be estimated
PNEC atmospheric	-	can not be estimated
PNEC STR	-	can not be estimated
PNEC STP –added	-	can not be estimated
PNEC oral (secondary poisoning)	-	can not be estimated

Exposure controls

Appropriate engineering controls

- Provide appropriate exhaust ventilation at places where dust is formed
- Apply technical measures to comply with the occupational exposure limits.

Personal protection

Respiratory protection

- Effective dust mask
- Recommended Filter type: P2

Hand protection

- Wear suitable gloves
- Suitable material: neoprene, Natural Rubber

Eye protection

- Safety goggles

Skin and body protection

- Dust impervious protective suit
- Rubber or plastic boots
- Rubber or plastic apron

Hygiene measures

- Ensure that eyewash stations and safety showers are close to the workstation location
- When using do not eat, drink or smoke
- Wash hands before breaks and at the end of workday
- Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls

- Dispose of rinse water in accordance with local and national regulations
- Detailed information is specified in the Section 12.

7. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state AT 20 °C and 101.3 kPa	:	Solid matter in the form of white odorless powder (microspheres)
Melting/freezing temperature:	:	851°C
Relative density	:	2,52-2,53 at 20°C
Water solubility	:	212,5 g/l at 20°C
Inflammability	:	The substance is non inflammable
Appearance:	Powder or granules	
Colour:	White	
Odour:	Odourless	

Explosive properties : The substance is non explosive

Oxidizing properties : The substance is non oxidising

Other information

Sodium carbonate has been in the context of the OECD HPV Chemicals Program (OECD,2002). The assessment, published by United Nations Environment Program (UNEP), is integrated in chemical safety report.

8. STABILITY AND REACTIVITY

Reactivity:	Decomposes by reaction with strong acids.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	None
Conditions to avoid:	Exposure to moisture.
Incompatible materials:	Finely divided aluminum.
Hazardous decomposition products:	None

9. TOXICOLOGICAL INFORMATION

Toxicological Kinetics

When contacting with biological liquids sodium carbonate decomposes into carbonate and sodium. Carbonate can potentially raise pH level in blood.

Sodium intake is the course of exposure of sodium carbonate on the h is less than at food intake. Therefore the regular presence of sodium carbonate in the human body is not probable. Oral intake of sodium carbonate results with its neutralization by gastric acid in the stomach.

Signs of acute toxicity

- Oral toxicity : $LD_{50} = 2,800 \text{ mg /kg bw, rats.}$
- Dermal toxicity : $LD_{50} = 2,000 \text{ mg /kg bw, rats.}$
- : $LD_{50} \text{ s - } 800 \text{ mg /m}_3 \text{ , cavies, exposure period 2 hours;}$
- : $LD_{50} \text{ s - } 1,200 \text{ mg /m}_3 \text{ , mice, exposure period 2 hours;}$
- : $LD_{50} \text{ s - } 800 \text{ mg /m}_3 \text{ , r, exposure period 2 hours;}$

Irritant action to eyes	:	Irritating to eyes
Irritant action on skin	:	Not irritating to skin
Respiratory irritation	:	Can cause irritation of respiratory channels.
Sensibilization	:	On the bases of available data the classification criteria are not applied.
Repeated dose toxicity	:	On the bases of available data the classification criteria are not applied.
Mutagenicity	:	On the bases of available data the classification criteria are not applied.
Carcinogenicity	:	On the bases of available data the classification criteria are not applied.

10. ECOLOGICAL INFORMATION

Toxicity

Not registered. Sodium carbonate decomposes on Na^+ and CO_3^{2-} ions which present in considerable quantities in ecosystems and living organisms. The concentration of ions depends on various factors; geological parameters, weather conditions, human activity. Both kinds of ions are carefully studied; their influence on ecosystems, living organisms and plants is unlikely or doesn't exist. Ecological classification and substance labeling is unnecessary.

Stability and biodegradability

Inessential

Migration in soils

Inessential

Other adverse effects

Inessential

11. WASTE DISPOSAL CONSIDERATIONS

Waste treatment methods Deposit in an authorized centre for collection of Non-Hazardous Industrial Waste

NOTES:

The user must pay attention to the possible existence of local instructions and regulations related to suitable means of disposal.

Contaminated packaging

- Where possible recycling is preferred to disposal or incineration.
- Clean container with water.
- Dispose of rinse water in accordance with local and national regulations.
- Contaminated packaging must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.

12. TRANSPORT INFORMATION

UN number : Without control
Chemical name : Sodium carbonate

Class of hazard(s) at transportation

ADR/RID – not classified

AND(R) – not classified

IMDG – not classified

ICAO/IATA – not classified

Packaging class : Without control
Marine pollutant : No
Other information : No special protective measures are required besides mentioned in Section 8.

**Transportation without
package (in bulk) in
accordance with
Appendix II MARPOL
73/78 and International
Law Transport of
Hazardous Chemicals
in bulk**

: Without control

13. NORMS (REGULATORY DATA)

Chemical Safety Assessment

Chemical Safety Assessment is provided for this substance.

Sources of basic data

OEDC (2002): Sodium carbonate, CAS no. 497-19-8. SIDS Initial Assessment Report For SIAM 15, Boston, USA, 22-25 October 2002.

Chemical Safety Report – Sodium carbonate, JSC <<Soda>> (of the 20th of September 2010)

14. OTHER INFORMATION

Recommendations on studying

Before using the substance please read the Safety Data Sheet.

Recommendations on using the Safety Data Sheet

The Safety Data Sheet is prepared according to Article 31 and Appendix II of EU REACH authorization No. 453/2010, EC GLP Regulations.

The responsible persons receiving this Safety Data Sheet must guarantee that those persons, who can use, process, utilize or otherwise contact to the product should read and correctly understand the information contained herein. If the recipient manufactures subsequently a composition containing this product, so only this recipient is responsible for carrying over the corresponding information from this Safety Data Sheet of the product into their own Safety Data Sheet.

As it is specified above, this Safety Data Sheet is prepared according to the current European Law. If you acquire this product outside of Europe where the legislation on conformity can differ, you should receive from your local supplier the Safety Data Sheet valid for the country in which the product is sold or where its use is supposed. Please pay attention that the exterior and the content of the Safety Data Sheet even for the same product can vary in the various countries, reflecting various requirements on conformity to the regulations (guidelines).

Other information

Safety Data Sheet (version 2.0) was revised in section of Name and Legal address of manufacturing company, to provide the distributors information namely SCM Group (Pty) Ltd – South Africa distributor of Romanian manufacturer's Sodium carbonate (Soda Ash).