SAFETY DATA SHEET
(according to Directive 2001/58/EC)

SODIUM CARBONATE

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Identification of the substance or preparation

Product name	:	SODIUM CARBONATE
Chemical name	:	Sodium carbonate
Synonym(s)	:	Light sodium carbonate, Dense sodium carbonate, Soda ash (light or dense)
Formula:	:	Na2CO3
Molecular Weight	:	106
EC Number (EINECS)	:	207-838-8

1.2. Use of the substance/preparation

Recommended uses :

- Glass industry
- Detergents
- Chemical industry
- Metallurgy

1.3. Company/undertaking identification

Address	:	SOLVAY CHEMICALS INTERNATIONAL S.A. RUE DU PRINCE ALBERT, 44 B- 1050 BRUXELLES
Tel.	:	+3225096111
Fax	:	+3225096624

1.4. Emergency telephone

2. COMPOSITION/INFORMATION ON INGREDIENTS

Sodium carbonate

CAS Number	:	497-19-8
ID Number (Annex I)	:	011-005-00-2
EC Number (EINECS)	:	207-838-8
Symbols	:	Xi
Phrases R	:	36
Concentration	:	**>= 98.00 %**

3. HAZARDS IDENTIFICATION

- Substance classified as dangerous according to Directive 67/548/EEC.
- Principal effect due to irritant properties.

4. FIRST-AID MEASURES

4.1. Inhalation

- Remove the subject from dusty environment and let him blow his nose.
- Consult with a physician in case of respiratory symptoms.

4.2. Eyes contact

- Flush eyes as soon as possible with running water for 15 minutes, while keeping the eyelids wide open.
- Consult with an ophthalmologist in all cases.

4.3. Skin contact

- Remove contaminated shoes, socks and clothing; wash the affected skin with running water.
- Clean clothing.
- Consult with a physician in case of persistent pain or redness.

4.4. Ingestion

General recommendations

- Consult with a physician in all cases.

If the subject is completely conscious:

- Rinse mouth and administer fresh water.
- Do not induce vomiting.

If the subject is unconscious:

- Classical resuscitation measures.

5. FIRE-FIGHTING MEASURES

5.1. Suitable extinguishing media

- In case of fire in close proximity, all means of extinguishing are acceptable.

5.2. Unsuitable extinguishing media

- No restriction.

5.3. Special exposure hazards

- Non-combustible

5.4. Protective measures in case of intervention

- The product does not require any special precautions.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions

- Follow the protective measures given in section 8.

6.2. Environmental precautions

- Prevent discharges into the environment (sewers, rivers, soils,...).
- Immediately notify the appropriate authorities in case of significant discharge.

6.3. Methods for cleaning up

- Collect the product with suitable means avoiding dust formation.
- Place everything into a closed, labelled container compatible with the product.
- For disposal methods, refer to section 13.
- Clean the area with large quantities of water.

7. HANDLING AND STORAGE

7.1. Handling

- Operate in a well-ventilated area.

7.2. Storage

- In a dry area.

7.3. Specific use(s)

- For any particulary use, please contact the supplier.

7.4. Packaging

- Paper + PE.
- Woven plastic material + PE coating.
- Woven plastic material + PE.

7.5. Other precautions

- Warn people about the dangers of the product.
- Avoid dust and formation of dust clouds.
- Follow the protective measures given in section 8.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Exposure limit values

Sodium carbonate
TLV (ACGIH-USA)
Result: Negligible

8.2. Exposure controls

- Premises ventilation.
- Provide local ventilation suitable for the emission risk.

8.2.1. Occupational exposure controls

8.2.1.1. Respiratory protection

- In case of dust clouds/fog/fumes, dust mask type P2.
- Use only respiratory protection that conforms to international/ national standards.

8.2.1.2. Hand protection

- Protective gloves - chemical resistant:
- Recommended materials: Neoprene, rubber

8.2.1.3. Eye protection

- Dust proof goggles, if dusty.

8.2.1.4. Skin protection

- Overalls
- Apron/boots of neoprene, rubber in case of dusts.

8.2.1.5. Other precautions

- Shower and eye wash stations.
- Consult the industrial hygienist or the safety manager for the selection of personal protective equipment suitable for the working conditions.

8.2.2. Environmental exposure controls

- Respect local/federal and national regulations for aqueous emissions (see section 15).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General information

Appearance	:	Crystals, powder, hygroscopic pellets
Color/Colour	:	white
Odor/Odour	:	odorless/odourless

9.2. Important health, safety and environmental information

pH	:	11.1 *Concentration*: 0,4 % *Temperature*: 25 °C
Boiling point	:	Not applicable
Flash point	:	Not applicable
Flammability	:	Not applicable
Explosive properties	:	No data
Density	:	*Specific gravity*: 2.5 *Bulk density*: from 0.5 - 0.7 kg/dm3 *Method*: Free flow (Light soda) from 0.9 - 1.15 kg/dm3 *Method*: Free flow (Dense soda)
Solubility	: : :	Water = 71 g/l *Temperature*: 0 °C = 215 g/l *Temperature*: 20 °C
Partition coefficient P (n-octanol/water)	:	Not applicable

9.3. Other information

Melting point/range	:	851 °C
Decomposition temperature	:	> 400 °C

10. STABILITY AND REACTIVITY

10.1. Conditions to avoid
- Moisture

10.2. Materials to avoid
- Aluminium in powder form

10.3. Hazardous decomposition products
- Negligible

11. TOXICOLOGICAL INFORMATION

11.1. Toxicological datas

Acute toxicity

- Oral route, LD 50, rat, > 2,000 mg/kg
- Inhalation, LC 50, 2 h, rat, 2.3 mg/l
- Dermal route, LD 50, rabbit, > 2,000 mg/kg

Irritation

- Rabbit, non irritant (skin)
- Rabbit, irritant (eyes)

Chronic toxicity

- In vitro, no mutagenic effect
- Oral route (gavage), various species, 179 mg/kg, 10day(s), No teratogenic effect
- Inhalation, rat, Target organ: lungs, 0.07mg/l, observed effect

Comments

- Irritant effect for the eyes

11.2. Health effects

Main effects

- Irritating to mucous membrane and eyes.

Inhalation

- Nose and throat irritation.
- At high concentrations, cough.
- In case of repeated or prolonged exposure: risk of sore throat, nose bleeds.

Eyes contact

- Severe eye irritation, watering, redness and swelling of the eyelids.
- Risk of serious or permanent eye lesions.

Skin contact

- When in contact with damp skin, irritation.
- In case of repeated contact: dry and chapped skin.

Ingestion

- Severe irritation and risk of burns to the mouth, throat, esophagus and stomach.
- Nausea and vomiting.
- By ingestion of large quantities: nausea and vomiting (bloody), abdominal cramps and diarrhea (bloody).

12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity

Acute ecotoxicity

- Fishes, Lepomis macrochirus, LC 50, 96 h, 300 mg/l
- Fishes, Gambusia affinis, LC 50, 96 h, 740 mg/l
- Crustaceans, Ceriodaphnia dubia, EC 50, 48 h, 200 - 227 mg/l

Chronic ecotoxicity

- Phytoplankton, EC, biomass, 7 Days, 14 mg/l

12.2. Mobility

- Air
  Result: not applicable
- Water
  Result: considerable solubility and mobility
- Soil/sediments
  Result: non-significant adsorption

12.3. Persistence and degradability

Abiotic degradation

- Water, hydrolysis
  Degradation's products: carbonate (pH > 10) / bicarbonate (pH 6 - 10) / carbonic acid/carbon dioxide (pH < 6)
- Soil
  Result: hydrolysis as a function of pH

Biotic degradation

- Aerobic/anaerobic
  Result: not applicable (inorganic compound)

12.4. Bioaccumulative potential

- log Po/w
  Result: not applicable (ionizable inorganic compound)

12.5. Other adverse effects

- Study in progress

12.6. Comments

- Observed effects are related to alkaline properties of the product.
- Product is not significantly hazardous for the environment.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment

- Dispose in compliance with local/federal and national regulations.
- Contact waste exchanges for recycling.
- Or
- Dissolve in water.
- Neutralise the product with an acid.
- Dilute with large quantities of water.

13.2. Packaging treatment

- To avoid treatments, as far as possible, use dedicated containers.
- If not,
- Rinse the empty containers with plenty of water and treat the effluent in the same way as waste.
- The empty and clean containers are to be reused in conformity with regulations.
- Or
- Dispose of the containers by dispatching them to an approved industrial incineration facility.

14. TRANSPORT INFORMATION

- Not subject

15. REGULATORY INFORMATION

15.1. EC Labelling

- Name of dangerous product(s) (to indicate on the label): Sodium carbonate
- Labelling following Directive 67/548/EEC.

Symbols	Xi	Irritant
Phrases R	36	Irritating to eyes.
Phrases S	(2) 22	(Keep out of the reach of children.) Do not breathe dust.

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

15.2. Additional informations (label for packaging)

- Indicate on the label: EC LABELING

16. OTHER INFORMATION

16.1. Reason for update

- Update:
- section 9
- section 10
- section 11
- sections 12 - 16

This MSDS is intended for only the selected countries to which it is applicable. For example, this MSDS is not intented for use nor distribution within North America. You should contact Solvay America company representative for the official North America MSDS.
The information given corresponds to the current state of our knowledge and experience of the product, and is not exhaustive. This applies to product which conforms to the specification, unless otherwise stated. In this case of combinations and mixtures one must make sure that no new dangers can arise. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and protection of human welfare and the environment.