

Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

- Trade name SODA SOLVAY® DENSE
- CAS-No. 497-19-8

1.2 Relevant identified uses of the substance or mixture and uses advised against**Uses of the Substance/Mixture**

- Glass industry
- Detergent
- Chemical industry
- Metallurgy.
- Purifying flue gas

1.3 Details of the supplier of the safety data sheet**Company**

SOLVAY CHEMICALS INTERNATIONAL SA
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BELGIUM
Tel: +32-2-2642111
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E-mail address

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1.4 Emergency telephone number

+44(0)1235 239 670 [CareChem 24]

Hazards identification**2.1 Classification of the substance or mixture****Classification (Classification GOST 32419)**

Acute toxicity, Category 5
Eye irritation, Category 2A

H303: May be harmful if swallowed.
H319: Causes serious eye irritation.

2.2 Label elements**Classification GOST 32419****Hazardous products which must be listed on the label**

- CAS-No. 497-19-8 sodium carbonate

Pictogram**Signal word**

- Warning

Hazard statements

- H303 May be harmful if swallowed.
- H319 Causes serious eye irritation.

Precautionary statements**Prevention**

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- P264 Wash skin thoroughly after handling.
 - P280 Wear eye protection/ face protection.
- Response**
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - P312 Call a POISON CENTER/doctor if you feel unwell.
 - P337 + P313 If eye irritation persists: Get medical advice/ attention.

2.3 Other hazards which do not result in classification

None known.

Composition/information on ingredients**3.1 Substance**

- Chemical name Sodium carbonate
- Synonyms Dense Sodium Carbonate/Soda Ash
- Formula Na₂CO₃

Information on Components and Impurities

Chemical name	Identification number	Concentration [%]
sodium carbonate	CAS-No. : 497-19-8	>= 99 - <= 100

For the full text of the H-Statements mentioned in this Section, see Section 16.

3.2 Mixture

- Not applicable, this product is a substance.

First aid measures**4.1 Description of first aid measures****In case of inhalation**

- Move to fresh air.
- If symptoms persist, call a physician.

In case of skin contact

- Wash off with soap and water.
- If symptoms persist, call a physician.

In case of eye contact

- In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- If eye irritation persists, consult a specialist.

In case of ingestion

- Rinse mouth with water.
- Do NOT induce vomiting.
- If symptoms persist, call a physician or Poison Control Centre immediately.

4.2 Most important symptoms and effects, both acute and delayed**In case of inhalation****Symptoms**

- At high concentrations:
- Cough

Effects

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- May cause nose, throat, and lung irritation.

Repeated or prolonged exposure

- Risk of sore throat, nose bleeds

In case of skin contact**Effects**

- Prolonged skin contact may cause skin irritation.

In case of eye contact**Symptoms**

- Redness
- Lachrymation
- Swelling of tissue

Effects

- Severe eye irritation

In case of ingestion**Symptoms**

- Severe irritation
- Nausea
- Abdominal pain
- Vomiting
- Diarrhoea

4.3 Indication of any immediate medical attention and special treatment needed**Notes to physician**

- If accidentally swallowed obtain immediate medical attention.

Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

- None

5.2 Special hazards arising from the substance or mixture

- Not combustible.

5.3 Advice for firefighters**Special protective equipment for firefighters**

- In the event of fire, wear self-contained breathing apparatus.
- Use personal protective equipment.

Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures****Advice for non-emergency personnel**

- Evacuate personnel to safe areas.
- Avoid dust formation.

Advice for emergency responders

- Use personal protective equipment.
- Sweep up to prevent slipping hazard.

6.2 Environmental precautions

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- Should not be released into the environment.
- Do not flush into surface water or sanitary sewer system.
- Prevent any mixture with an acid into the sewer/drain (gas formations).
- Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and materials for containment and cleaning up

- Sweep up and shovel into suitable containers for disposal.
- Keep in properly labelled containers.
- Keep in suitable, closed containers for disposal.
- Treat recovered material as described in the section "Disposal considerations".

6.4 Reference to other sections

- Refer to protective measures listed in sections 7 and 8.

Handling and storage

7.1 Precautions for safe handling

- Ensure adequate ventilation.
- Minimize dust generation and accumulation.
- Avoid contact with skin and eyes.
- Keep away from incompatible products

Hygiene measures

- Eye wash bottles or eye wash stations in compliance with applicable standards.
- 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.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions

- Store in original container.
- Keep in a dry place.
- Keep in properly labelled containers.
- Keep container closed.

- Keep away from:
- Incompatible products

Packaging material

Suitable material

- Polyethylene
- Woven plastic material.

Unsuitable material

- Material moisture permeable

7.3 Specific end use(s)

- Contact your supplier for additional information
- This grade of the product is not intended for pharmaceutical, feed or food applications.

Exposure controls/personal protection**8.1 Control parameters****Components with workplace occupational exposure limits**

Components	Value type	Value	Basis
sodium carbonate	TWA	10 mg/m ³	Solvay Acceptable Exposure Limit

8.2 Exposure controls**Control measures****Engineering measures**

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

Individual protection measures**Respiratory protection**

- Effective dust mask

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

- Eye wash bottles or eye wash stations in compliance with applicable standards.
- 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.

Physical and chemical properties**9.1 Information on basic physical and chemical properties****Appearance**

Form: powder
 Physical state: solid
 Colour: white
 Particle size: > 125 µm (85 - 90 %)

Odour

odourless

Odour Threshold

no data available

Molecular weight

106 g/mol

pH	11,2 (4 g/l) (25 °C) 11,3 (10 g/l) (25 °C) pKa: 6,4 - 10,3
<u>Melting point/freezing point</u>	<u>Melting point/range</u> : 851 °C
<u>Initial boiling point and boiling range</u>	<u>Boiling point/boiling range</u> : Not applicable
<u>Flash point</u>	Not applicable
<u>Evaporation rate (Butylacetate = 1)</u>	Not applicable
<u>Flammability (solid, gas)</u>	Not applicable
<u>Flammability/Explosive limit</u>	<u>Explosiveness</u> : Not applicable
<u>Auto-ignition temperature</u>	Not applicable
<u>Vapour pressure</u>	negligible
<u>Vapour density</u>	Not applicable
<u>Density</u>	<u>Bulk density</u> : 0,97 - 1,10 kg/dm ³ Method: Free flow
<u>Relative density</u>	2,53 (20 °C)
<u>Solubility</u>	<u>Water solubility</u> : 71 g/l (0 °C) 212,5 g/l (20 °C)
<u>Partition coefficient: n-octanol/water</u>	Not applicable
<u>Decomposition temperature</u>	> 400 °C
<u>Viscosity</u>	<u>Viscosity, dynamic</u> : Not applicable
<u>Explosive properties</u>	no data available
<u>Oxidizing properties</u>	Not considered as oxidizing

9.2 Other information

no data available

Stability and reactivity**10.1 Reactivity**

- Decomposes by reaction with strong acids.

10.2 Chemical stability

- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

- no data available

10.4 Conditions to avoid

- Exposure to moisture

10.5 Incompatible materials

- Finely divided aluminium

10.6 Hazardous decomposition products

- none

Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity

LD50 : 2.800 mg/kg - Rat , male and female
The product has a low acute toxicity
Unpublished reports

Acute inhalation toxicity

no data available

Acute dermal toxicity

LD50 : > 2.000 mg/kg - Rabbit
Method: according to a standardised method
Not classified as hazardous for acute dermal toxicity according to GHS.
No mortality observed at this concentration.
Unpublished reports

Acute toxicity (other routes of administration)

no data available

Skin corrosion/irritation

Rabbit
Not classified as irritating to skin
Method: OECD Test Guideline 404
Unpublished reports

Serious eye damage/eye irritation

Rabbit
Irritating to eyes.
Method: according to a standardised method
Unpublished reports

Respiratory or skin sensitisation

no data available

Mutagenicity**Genotoxicity in vitro**

By analogy

Ames test
with metabolic activation
Product is not considered to be genotoxic
Published data

Strain: Escherichia coli
without metabolic activation

negative
Product is not considered to be genotoxic
Published data

Genotoxicity in vivo

no data available

Carcinogenicity

no data available

Toxicity for reproduction and development**Toxicity to reproduction/Fertility**

no data available

Developmental Toxicity/Teratogenicity

Mouse , female
Application Route: Oral
NOAEL teratogenicity: ≥ 580 mg/kg
NOAEL maternal: ≥ 580 mg/kg
Method: according to a standardised method
no embryotoxic or teratogenic effects have been observed
Unpublished reports

STOT**STOT - single exposure**

The substance or mixture is not classified as specific target organ toxicant, single exposure according to GHS criteria.
internal evaluation

STOT - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure according to GHS criteria.
internal evaluation

Aspiration toxicity

no data available

Ecological information**12.1 Toxicity****Aquatic Compartment****Acute toxicity to fish**

LC50 - 96 h : 300 mg/l - Lepomis macrochirus (Bluegill sunfish)
static test
Analytical monitoring: no

Method: according to a standardised method
Not harmful to fish (LC/LL50 > 100 mg/L)
Published data

Acute toxicity to daphnia and other aquatic invertebrates.

EC50 - 48 h : 200 - 227 mg/l - Ceriodaphnia dubia (water flea)
semi-static test
Method: according to a standardised method
Not harmful to aquatic invertebrates. (EC/EL50 > 100 mg/L)
Published data

Toxicity to aquatic plants no data available

Toxicity to microorganisms no data available

Chronic toxicity to fish no data available

Chronic toxicity to daphnia and other aquatic invertebrates. no data available

Chronic Toxicity to aquatic plants no data available

12.2 Persistence and degradability**Abiotic degradation****Photodegradation**

hydrolyses
Test substance: Water
carbonic acid/bicarbonate/carbonate
acid/base equilibrium as a function of pH

Physical- and photo-chemical elimination

no data available

Biodegradation**Biodegradability**

Not applicable (inorganic substance)

Degradability assessment

The product is not considered to be rapidly degradable in the environment

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water no data available

Bioconcentration factor (BCF)
Not applicable (inorganic substance)

12.4 Mobility in soil

Adsorption potential (Koc)

Air
Not applicable

Solubility(ies)
Water

Mobility
Water

Soil/sediments
not significant

Known distribution to environmental compartments no data available

12.5 Results of PBT and vPvB assessment

Not applicable (inorganic substance)

12.6 Other adverse effects

no data available

Ecotoxicity assessment

Acute aquatic toxicity
Not harmful to aquatic life (LC/LL50, EC/EL50 > 100 mg/L)

Chronic aquatic toxicity
Not classified due to data which are conclusive although insufficient for classification.

Disposal considerations

13.1 Waste treatment methods

Product Disposal

- Contact waste disposal services.
- If recycling is not practicable, dispose of in compliance with local regulations.
- Dilute with plenty of water.
- Neutralise with acid.
- In accordance with local and national regulations.

Advice on cleaning and disposal of 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.
- Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.

Transport information**ADR**

not regulated

RID

not regulated

IMDG

not regulated

IATA

not regulated

ADN/ADNR

not regulated

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transport regulations for hazardous materials, it would be advisable to check their validity with your sales office.

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

- According to GOST 30333-2007

Notification status

Inventory Information	Status
United States TSCA Inventory	- Listed on Inventory
Mexico INSQ (INSQ)	- Listed on Inventory
Canadian Domestic Substances List (DSL)	- Listed on Inventory
New Zealand. Inventory of Chemical Substances	- Listed on Inventory
Australia Inventory of Chemical Substances (AICS)	- Listed on Inventory
Japan. CSCL - Inventory of Existing and New Chemical Substances	- Listed on Inventory
Korea. Korean Existing Chemicals Inventory (KECI)	- Listed on Inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	- Listed on Inventory
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	- Listed on Inventory
EU. European Registration, Evaluation, Authorisation and Restriction of Chemical (REACH)	- If product is purchased from Solvay in Europe it is in compliance with REACH, if not please contact the supplier.

Other information**Full text of H-Statements referred to under sections 2 and 3.**

- H303 May be harmful if swallowed.
- H319 Causes serious eye irritation.

Further information

- This sheet was updated (refer to the date at the top of this page). Subheadings and text which have been modified since the previous version are indicated with two vertical bars.
- Distribute new edition to clients

NB: In this document the numerical separator of the thousands is the "." (point), the decimal separator is "," (comma).
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in any other manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.