

SAFETY DATA SHEET

North American Version

SODA ASH (Sodium Carbonate)

1. PRODUCT AND COMPANY IDENTIFICATION

1.1. Identification of the substance or preparation

Product name : SODA ASH (Sodium Carbonate)
Product grade(s) : Dense Soda Ash
Chemical Grade Soda Ash
Chemical Name : Sodium carbonate
Synonyms : soda salt, soda crystal, disodium carbonate
Molecular formula : Na₂CO₃
Molecular Weight : 106 g/mol

1.2. Use of the Substance/Preparation

Recommended use : - Glass industry
- Metallurgy
- Detergent
- Chemical industry
- Pulp and paper
- Ion exchange resins regenerating agent
- Purifying flue gas

1.3. Company/Undertaking Identification

Address : SOLVAY CHEMICALS, INC.
3333 RICHMOND AVENUE
HOUSTON TX 77098-3099
United States

1.4. Emergency and contact telephone numbers

Emergency telephone : 1 (800) 424-9300 CHEMTREC® (USA & Canada)
01-800-00-214-00 (MEX. REPUBLIC)

Contact telephone number : US: +1-800-765-8292 (Product information)
(product information): US: +1-713-525-6500 (Product information)

2. HAZARDS IDENTIFICATION

2.1. Emergency Overview:

NFPA : H= 2 F= 0 I= 0 S= None
HMIS : H= 2 F= 0 R= 0 PPE = Supplied by User; dependent on local conditions

General Information

Appearance : granules, powder
Colour : white
Odour : odourless

Main effects

- This substance is classified and labelled according to Annex I of Directive 67/548/EEC, as amended.
- Irritating to eyes.

2.2. Potential Health Effects:

Inhalation

- Product dust may be irritating to eyes, skin and respiratory system.
- Irritating to mucous membranes
- Repeated or prolonged exposure: Risk of sore throat, nose bleeds.
- (in case of higher concentration): Cough.

Eye contact

- Severe eye irritation
- Lachrymation
- Redness
- Swelling of tissue
- May cause irreversible eye damage.

Skin contact

- When in contact with damp skin, irritation.
- Itching
- Repeated exposure may cause skin dryness or cracking.

Ingestion

- Severe irritation
- Irritation of the mouth and throat.
- Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Other toxicity effects

- See section 11: Toxicological Information

2.3. Environmental Effects:

- See section 12: Ecological Information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Sodium carbonate

CAS-No. : 497-19-8
Concentration : **>= 99,8 %**

4. FIRST AID MEASURES

4.1. Inhalation

- Remove the subject from dusty environment and let him blow his nose.
- If symptoms persist, call a physician.

4.2. Eye contact

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- Consult with an ophthalmologist immediately in all cases.

4.3. Skin contact

- Remove and wash contaminated clothing before re-use.
- Wash off with plenty of water.
- If symptoms persist, call a physician.

4.4. Ingestion

- Call a physician immediately.

If victim is conscious:

- If swallowed, rinse mouth with water (only if the person is conscious).
- Do NOT induce vomiting.

If victim is unconscious but breathing:

- Artificial respiration and/or oxygen may be necessary.

5. FIRE-FIGHTING MEASURES

5.1. Suitable extinguishing media

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

5.2. Extinguishing media which shall not be used for safety reasons

- None.

5.3. Special exposure hazards in a fire

- Not combustible.

5.4. Hazardous decomposition products

- none

5.5. Special protective equipment for fire-fighters

- No special precautions required.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions

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

6.2. Environmental precautions

- Do not flush into surface water or sanitary sewer system.
- If the product contaminates rivers and lakes or drains inform respective authorities.

6.3. Methods for cleaning up

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

7. HANDLING AND STORAGE

7.1. Handling

- Use only in well-ventilated areas.
- Keep away from Incompatible products.

7.2. Storage

- Keep in a dry place.
- Store in original container.
- Keep container closed.
- Keep away from Incompatible products.

7.3. Packaging material

- Polyethylene
- Woven plastic material + PE.

7.4. Other information

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Exposure Limit Values

Sodium carbonate

- SAEL (Solvay Acceptable Exposure Limit) 2007
TWA = 10 mg/m³

Particles not otherwise specified (PNOS)

- Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) 04 2004
time weighted average = 3 mg/m³
Remarks: Respirable particles.
- Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) 04 2004
time weighted average = 10 mg/m³
Remarks: Total particulate.
- Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) 07 2006
time weighted average = 10 mg/m³
Remarks: Total dust
- Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) 07 2006
time weighted average = 3 mg/m³
Remarks: respirable dust fraction
- Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents) 03 2006
time weighted average = 3 mg/m³
Remarks: Respirable particles.
- Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents) 03 2006
time weighted average = 10 mg/m³
Remarks: Inhalable particulate.
- Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) 2006
time weighted average = 10 mg/m³
Remarks: Total dust
- US. ACGIH Threshold Limit Values 2008
time weighted average = 10 mg/m³
Remarks: Inhalable particles.

8.2. Engineering controls

- Ensure adequate ventilation.
- Provide appropriate exhaust ventilation at places where dust is formed.
- Refer to protective measures listed in sections 7 and 8.
- Apply technical measures to comply with the occupational exposure limits.

8.3. Personal protective equipment

8.3.1. Respiratory protection

- In case of insufficient ventilation, wear suitable respiratory equipment.
- Use only respiratory protection that conforms to international/ national standards.
- Use NIOSH approved respiratory protection.
- Respirator must be worn if exposed to dust.

8.3.2. Hand protection

- Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
- Wear suitable gloves.
- Suitable material: Neoprene, Natural Rubber

8.3.3. Eye protection

- Dust proof goggles, if dusty.

8.3.4. Skin and body protection

- long sleeved clothing
- dust impervious protective suit
- Rubber or plastic boots.
- Rubber or plastic apron

8.3.5. Hygiene measures

- Use only in an area equipped with a safety shower.
- When using do not eat, drink or smoke.
- Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General Information

Appearance	: granules, powder
Colour	: white
Odour	: odourless

9.2. Important health safety and environmental information

pH	: 11,1 <i>Concentration: 4,016 g/l</i> <i>Temperature: 25 °C (77 °F)</i>
Boiling point/boiling range	: <i>Remarks: not applicable</i>
Flash point	: <i>Remarks: not applicable</i>
Flammability	: <u>Lower explosion limit:</u> <i>Remarks: not applicable</i>
Explosive properties	: <u>Explosion danger:</u> <i>Remarks: not applicable</i>
Relative density / Density	: 2,5
Bulk density	: from 0,5 - 0,8 kg/dm ³ <i>Method: Free flow</i>
Solubility	: Water = 71 g/l <i>Temperature: 0 °C (32 °F)</i> : = 215 g/l <i>Temperature: 20 °C (68 °F)</i>
Partition coefficient: n-octanol/water	: <i>Remarks: not applicable</i>

9.3. Other data

Melting point/range	:	851 °C (1.564 °F)
Granulometry	:	95 - 100 % < 180 µm 0 - 5 % > 180 µm
Decomposition temperature	:	<i>Remarks: not applicable</i>

10. STABILITY AND REACTIVITY

10.1. Stability

- Stable under recommended storage conditions.

10.2. Conditions to avoid

- Exposure to moisture.

10.3. Materials to avoid

- Finely divided aluminium

10.4. Hazardous decomposition products

- none

11. TOXICOLOGICAL INFORMATION

Toxicological data

Acute oral toxicity

- LD50, rat, > 2.000 mg/kg

Acute inhalation toxicity

- LC50, 2 h, rat, 2,3 mg/l

Acute dermal irritation/corrosion

- LD50, rabbit, 2.000 mg/kg

Skin irritation

- rabbit, No skin irritation

Eye irritation

- rabbit, irritant effects

Chronic toxicity

- Inhalation, rat, Target Organs: Lungs, NOEL: 0,07 mg/l, observed effect

Genetic toxicity in vitro

- *Remarks: no observed effect*

Teratogenicity

- Oral route (gavage), 10 days, Various species, 179 mg/kg, Did not show teratogenic effects in animal experiments.

Remarks

- Irritating to eyes.

12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity effects

Acute toxicity

- Fishes, *Lepomis macrochirus*, LC50, 96 h, 300 mg/l
- Fishes, *Gambusia affinis*, LC50, 96 h, 740 mg/l
- Crustaceans, *Ceriodaphnia dubia*, EC50, 48 h, 200 - 227 mg/l

Chronic toxicity

- Phytoplankton, EC50, biomass, 7 Days, 14 mg/l

12.2. Mobility

- Air
Remarks: not applicable
- Water
Remarks: Solubility
- Water
Remarks: Mobility
- Soil/sediments
Remarks: not significant

12.3. Persistence and degradability

Abiotic degradation

- Water, hydrolyses
Result: acid/base equilibrium as a function of pH
Degradation products: carbonic acid/bicarbonate/carbonate

Biodegradation

- Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.

12.4. Bioaccumulative potential

- Result: not applicable

12.5. Other adverse effects

- no data available

12.6. Remarks

- Ecological injuries are not known or expected under normal use.

13. DISPOSAL CONSIDERATIONS

13.1. Waste from residues / unused products

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

13.2. Packaging treatment

- To avoid treatments, as far as possible, use dedicated containers.
- or
- Clean container with water.
- Dispose of rinse water in accordance with local and national regulations.
- The empty and clean containers are to be reused in conformity with regulations.
- or
- Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities.

13.3. RCRA Hazardous Waste

- Listed RCRA Hazardous Waste (40 CFR 302) - No

- Unlisted RCRA Hazardous Waste (40 CFR 302) - No

14. TRANSPORT INFORMATION

U.S. Dept of Transportation

Class (Subsidiary)

Remarks:

It is recommended that ERG Guide number 111 be used for all non-regulated material.

- Sea (IMO/IMDG)
- not regulated
- Air (ICAO/IATA)
- not regulated
- U.S. Dept of Transportation
- not regulated
- It is recommended that ERG Guide number 111 be used for all non-regulated material.
- Canadian Transportation of Dangerous Goods
- not regulated

15. REGULATORY INFORMATION

15.1. Inventory Information

Australian Inventory of Chemical Substances (AICS)	: -	In compliance with inventory.
Canadian Domestic Substances List (DSL)	: -	In compliance with inventory.
Korean Existing Chemicals List (ECL)	: -	In compliance with inventory.
EU list of existing chemical substances (EINECS)	: -	In compliance with inventory.
Japanese Existing and New Chemical Substances (MITI List) (ENCS)	: -	In compliance with inventory.
Inventory of Existing Chemical Substances (China) (IECS)	: -	In compliance with inventory.
Philippine Inventory of Chemicals and Chemical Substances (PICCS)	: -	In compliance with inventory.
Toxic Substance Control Act list (TSCA)	: -	In compliance with inventory.
New Zealand Inventory (in preparation) (NZ)	: -	One or more components not on composite list considered for transfer.
Schweizer Giftliste-1 (GL-1)	: -	In compliance with inventory.

15.2. Other regulations

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

- no.

US. EPA CERCLA Hazardous Substances (40 CFR 302)

- not regulated.

US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

- not regulated.

US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

- not regulated.

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

- not regulated.

15.3. Classification and labelling

Canada. Canadian Environmental Protection Act (CEPA). WHMIS Ingredient Disclosure List (Can. Gaz., Part II, Vol. 122, No. 2)

- D2B Toxic Material Causing Other Toxic Effects

Remarks: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

EC Label

- This substance is classified and labelled according to Annex I of Directive 67/548/EEC, as amended.

Symbol(s)	Xi	Irritant
R-phrase(s)	R36	Irritating to eyes.
S-phrase(s)	S 2 S22 S26	Keep out of the reach of children. Do not breathe dust. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

16. OTHER INFORMATION

Ratings :

NFPA (National Fire Protection Association)

Health = 2 Flammability = 0 Instability = 0 Special =None

HMIS (Hazardous Material Information System)

Health = 2 Fire = 0 Reactivity = 0 PPE : Supplied by User; dependent on local conditions

Further information

- System maintenance
- Distribute new edition to clients

Material Safety Data Sheets contain country specific regulatory information; therefore, the MSDS's provided are for use only by customers of the company mentioned in section 1 in North America. If you are located in a country other than

Canada, Mexico or the United States, please contact the Solvay Group company in your country for MSDS information applicable to your location. The previous information is based upon our current knowledge and experience of our product and is not exhaustive. It applies to the product as defined by the specifications. In case of combinations or mixtures, one must confirm that no new hazards are likely to exist. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and integrity of the work environment. (Unless noted to the contrary, the technical information applies only to pure product). To our actual knowledge, the information contained herein is accurate as of the date of this document. However, neither the company mentioned in section 1 nor any of its affiliates makes any warranty, express or implied, including merchantability or fitness for use, or accepts any liability in connection with this information or its use. This information is for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other substance or any other process. This is not a license under any patent or other proprietary right. The user alone must finally determine suitability of any information or material for any contemplated use, the manner of use and whether any patents are infringed. This information gives typical properties only and is not to be used for specification purposes. The company mentioned in section 1 reserves the right to make additions, deletions or modifications to the information at any time without prior notification. Trademarks and/or other products of the company mentioned in section 1 referenced herein are either trademarks or registered trademarks of the company mentioned in section 1 or its affiliates, unless otherwise indicated.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

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