

SODA ASH (Sodium Carbonate)

1. PRODUCT AND COMPANY IDENTIFICATION

1.1. Identification of the substance or mixture

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

1.2. Use of the Substance/Mixture

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 : DrilRite – Chem LLC 702 Blackjack ST, Winnsboro, TX 75494

USA

1.4. Emergency and contact telephone numbers **Emergency telephone number** 903-262-0078

2. HAZARDS IDENTIFICATION

2.1. Emergency Overview:

NFPA : H= 2 F= 0 I= 0 S= None

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HMIS : H= 2 F= 0 R= 0 PPE = Supplied by User; dependent on local conditions

General Information

Appearance : granules, powder
Colour : white
Odour : odourless

2.2. Potential Health Effects:

Inhalation

- May cause nose, throat, and lung irritation.
- Repeated or prolonged exposure: Risk of sore throat, nose bleeds. - (in case of higher concentration): Cough.

Eye contact

- Severe eye irritation
- Symptoms: Redness, Lachrymation, Swelling of tissue.

Skin contact

- Prolonged skin contact may cause skin irritation.

Ingestion

- Severe irritation
- Symptoms: Nausea, Abdominal pain, Vomiting, 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

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

4.2. 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.

4.3. Skin contact

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

4.4. Ingestion

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

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4.5. Notes to physician

Exposure to decomposition products :

- Immediate medical attention is required.
- If accidentally swallowed obtain immediate medical attention. -
Oxygen or artificial respiration if needed.

5. FIREFIGHTING 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 firefighters

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

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. Advice for non-emergency personnel

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

6.1.2. Advice for emergency responders -

- Use personal protective equipment.
- Sweep up to prevent slipping hazard.
- Prevent further leakage or spillage.

6.2. Environmental precautions

- 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.

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

7. HANDLING AND STORAGE

7.1. Handling

- Ensure adequate ventilation.

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- Minimize dust generation and accumulation.
- Avoid contact with skin and eyes.
- Keep away from Incompatible products.

7.2. Storage

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

7.3. Packaging material

- Polyethylene
- Woven plastic material + PE.

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. 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. (Control of Exposure to Biological or Chemical Agents) 03 2006 time weighted average = 3 mg/m³ Remarks: Respirable particles.
- Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) 11 2010 time weighted average = 10 mg/m³
- US. ACGIH Threshold Limit Values 2007 time weighted average = 3 mg/m³ Remarks: as respirable particles
- US. ACGIH Threshold Limit Values 2010 time weighted average = 10 mg/m³ Remarks: Inhalable fraction

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- Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) 12 2008 time weighted average = 10 mg/m³ Remarks:
Total dust
- Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) 07 2009 time weighted average = 3 mg/m³ Remarks: Respirable particles.
- Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) 07 2009 time weighted average = 10 mg/m³ Remarks: Total particulate.
- Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) 05 2009
8 hour average contamination limit: = 10 mg/m³
Remarks: Alveolar dust fraction
- Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) 05 2009
8 hour average contamination limit: = 3 mg/m³ Remarks:
respirable dust fraction
- Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) 05 2009
15 minute average contamination limit: = 20 mg/m³
Remarks: Alveolar dust fraction
- Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) 05 2009
15 minute average contamination limit: = 6 mg/m³ Remarks:
respirable dust fraction
- Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) 03 2011 time weighted average = 10 mg/m³
- Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) 03 2011 time weighted average = 3 mg/m³

8.2. Engineering controls

- 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 -

Effective dust mask.

- Use only respiratory protection that conforms to international/ national standards.
- Use NIOSH approved respiratory protection.

8.3.2. Hand protection

- Wear suitable gloves.
- Suitable material: Neoprene, Natural Rubber

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8.3.3. Eye protection

- Goggles

8.3.4. Skin and body protection

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

8.3.5. Hygiene measures

- 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.

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	: 11,16 <i>Concentration: 4 g/l</i> <i>Temperature: 25 °C (77 °F)</i>
	: 11,3 <i>Concentration: 10 g/l</i> <i>Temperature: 25 °C (77 °F)</i>
pKa	: pKa1= 6,35; pKa2 = 10,33
Boiling point/boiling range	: <i>Remarks: not applicable</i>
Flash point	: <i>Remarks: not applicable</i>
Flammability	: <i>Remarks: not applicable</i>
Explosive properties	: <u><i>Explosion danger.</i></u> <i>Remarks: not applicable</i>
Oxidizing properties	: <i>Remarks: Non oxidizer</i>

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Vapour pressure	: <i>Remarks:</i> negligible
Relative density / Density	: 2,53 <i>Temperature:</i> 20 °C (68 °F)
Bulk density	: from 56 lb/ft ³ : to 66 lb/ft ³ : from 0,9 kg/dm ³ : to 1,06 kg/dm ³
Solubility(ies)	: = 71 g/l <i>Remarks:</i> Water <i>Temperature:</i> 0 °C (32 °F) : = 215 g/l <i>Remarks:</i> Water <i>Temperature:</i> 20 °C (68 °F)
Partition coefficient: n-octanol/water	: <i>Remarks:</i> not applicable
Viscosity	: <i>Remarks:</i> not applicable
Vapour density	: <i>Remarks:</i> not applicable
Evaporation rate	: <i>Remarks:</i> not applicable

9.3. Other data

Melting point/range	: 851 °C (1.564 °F)
Auto-flammability	: <i>Remarks:</i> not applicable
Granulometry	: 80 - 100 % < 160 µm
Decomposition temperature	: > 400 °C (752 °F)

10. STABILITY AND REACTIVITY

10.1. Stability

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- 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, 2.800 mg/kg

Acute inhalation toxicity

- LC50, 2 h, guinea pig, 0,8 mg/l
- LC50, 2 h, mouse, 1,2 mg/l - LC50, 2 h, rat, 2,3 mg/l

Acute dermal irritation/corrosion

- LD50, rabbit, > 2.000 mg/kg

Skin irritation

- rabbit, No skin irritation
- Human experience, No skin irritation

Eye irritation

- rabbit, irritant effects

Carcinogenicity

- Remarks: No data available

Genetic toxicity in vitro

- In vitro tests did not show mutagenic effects

Reproductive toxicity

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

12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity effects

Acute toxicity

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

12.2. Mobility

- Air
Remarks: not applicable

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- Water
Remarks: Solubility(ies)
- 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: Does not bioaccumulate.

12.5. Other adverse effects **12.6. Remarks**

- No data available

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.
- Dilute with plenty of water.
- Neutralise with acid.
- In accordance with local and national regulations.

13.2. Packaging treatment

- 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.

13.3. RCRA Hazardous Waste

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

14. TRANSPORT INFORMATION

- Sea (IMO/IMDG)
- not regulated
- Air (ICAO/IATA)
- not regulated

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- 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

Australia. Inventory of Chemical Substances (AICS)	: -	In compliance with inventory.
Canada. 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.
Korea. Existing Chemicals Inventory (KECI (KR))	: -	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.
USA. Toxic Substances Control Act (TSCA)	: -	In compliance with inventory.
New Zealand. Inventory of Chemicals (NZIOC)	: -	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.

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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 - According to Regulation (EC) 1272/2008, as amended Name(s)

on label

Hazardous components : Sodium carbonate

Signal word

Warning

Hazard pictograms



Hazard statements

H319 - Causes serious eye irritation.

Precautionary statements

Prevention

P264

- Wash hands thoroughly after handling.

P280

- Wear protective gloves/ protective clothing/ 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.

P337 + P313

- If eye irritation persists: Get medical advice/ attention.

16. OTHER INFORMATION

Ratings :

NFPA (National Fire Protection Association)

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

HMIS (Hazardous Material Information System)

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

Further information

- Update
This data sheet contains changes from the previous version in section(s): 15.2
- 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).

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