

MSDS

Material Safety Data Sheets

Reviewed on: 26 Sep 2020

Material Safety Data Sheet

Soda Ash

1. PRODUCT AND COMPANY IDENTIFICATION

Identification of the substance/preparation

Product Name : Soda Ash

Chemical Name : Sodium carbonate, anhydrous

Synonyms : Soda salt, soda crystal, disodium carbonate.

Chemical Formula : Na₂CO₃

Molecular Weight : 105.99

CAS Number : 497-19-8

Grades/Trade Names : Dense soda ash; chemical grade soda ash

Use of the Substance/Preparation

Recommended use : Glass industry, chemical intermediates, metallurgy, soaps and detergents, pulp & paper, flue gas emissions, coal treatment, ion exchange

2. HAZARDS IDENTIFICATION

Emergency Overview:

General Information

Appearance :

granules,

powder

Color : White

Odor : odorless

Main effects

- Serious damage to eyes.
- Irritating to skin and mucous membranes

Potential Health Effects:

Inhalation

- Product Dust may be irritating to eyes, skin and respiratory tract.
- 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

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Material Safety Data Sheets

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

Environmental Effects:

- See section 12: Ecological Information

3. COMPOSITION OF/INFORMATION ON INGREDIENTS:

Ingredient: Sodium Carbonate

CAS: 497-19-8

Concentration: $\geq 99.80\%$

4. FIRST AID MEASURES

Inhalation:

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

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.

Skin contact:

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

Ingestion:

The following actions are recommended:

- 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.
- Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

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

Extinguishing media which must not be used for safety reasons:

- None

Special exposure hazards in a fire:

- Not combustible.

Special protective equipment for fire-fighters:

- No special precautions required.

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Material Safety Data Sheets

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Refer to protective measures listed in sections 7 and 8.

Environmental precautions:

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

Methods for cleaning up:

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

7. HANDLING AND STORAGE

Handling:

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

Storage:

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

Packaging material:

- Polyethylene
- Woven plastic material + PE.

Other information:

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

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limit Values

OSHA PEL

Sodium Carbonate

Nuisance Dust 5mg/m³ (Respirable fraction)

Engineering controls:

- Ensure adequate ventilation.
- Provide adequate 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.

Personal protective equipment

Respiratory protection

- Use only respiratory protection that conforms to international/ national standards.
- In case of insufficient ventilation, wear suitable respiratory equipment.
- Use NIOSH approved respiratory protection.

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Material Safety Data Sheets

- Respirator with a dust filter

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.

Eye protection:

- Dust proof goggles, if dusty.

Skin and body protection:

- Long sleeved clothing
- Dust impervious protective suit
- Rubber or plastic boots
- Rubber or plastic apron

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

Color : White

Odor : Odorless

9.2. Important Health Safety and Environmental Information

pH : 11.1

Concentration: 4.016 g/l Temperature: 25 °C (77 °F)

Boiling point/range : Not applicable

Flash point : Not applicable

Flammability : Not applicable

Explosive properties : Not applicable

Oxidizing properties : Not applicable

Vapor pressure : Not applicable

Relative density / Density: 2.5

Partition coefficient (n- : Not applicable
octanol/water)

Viscosity : Not applicable

Vapor density : Not applicable

Bulk density : from 0.5 - 0.8 kg/dm³ (approx 62 lbs/ft³)

Method: Free flow

Solubility : Water : 71 g/l Temperature: 0 °C (32 °F)

215 g/l Temperature: 20 °C (68 °C)

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9.3 Other information

Melting point/range : 851 °C (1,564 °F)

Decomposition : > 400 °C (752 °F)

temperature

Granulometry : 95-100 % < 180 µm

0-5 % > 180 µm

10. STABILITY AND REACTIVITY

Stability:

- Stable under recommended storage conditions.

Conditions to avoid:

- Exposure to moisture.

Materials to avoid:

- Finely divided aluminum

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/ Carcinogenic Designation:

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, NOAEL teratog. : 179 mg/kg, Did not show teratogenic effects in animal experiments.

Remarks

- Irritating to eyes.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Acute toxicity

- Fishes, *Lepomis macrochirus*, LC50, 96 h, 300 mg/l

- Fishes, *Gambusia affinis*, LC50, 96 h, 740 mg/l

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- Crustaceans, Ceriodaphnia dubia, EC50, 48 h, 200 - 227 mg/l

Chronic toxicity

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

Mobility

- Air

Remarks: not applicable

- Water

Remarks: Solubility

- Water

Remarks: Mobility

- Soil/sediments

Remarks: not significant

Persistence and degradability

Abiotic degradation

- Water, Hydrolysis

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

Biodegradation

- Remarks: The methods for determining biodegradability are not applicable to
inorganic substances.

Bio accumulative potential

- Not Applicable

Other adverse effects

- No data available

Remarks

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

13. DISPOSAL CONSIDERATIONS

Waste treatment:

Soda Ash is not a listed hazardous waste under 40 CFR 261. However, state and local regulations for waste disposal may be more restrictive. Spilled product should be disposed of in accordance with applicable federal, state and local environmental laws and regulations.

Packaging treatment:

To avoid treatments, use dedicated containers where possible.

Rinse the empty containers and treat the effluent in the same way as waste.

Consult current federal, state and local regulations regarding the proper disposal of emptied containers.

RCRA Hazardous Waste: Not Listed

14. TRANSPORT INFORMATION

Mode	DOT	IMDG	IATA
UN Number	Not a regulated hazardous material	Not a regulated hazardous material	Not a regulated hazardous material

It is recommended that ERG guide # 111 be used for all non DOT regulated material.

STCC # 28-123-22

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Material Safety Data Sheets

15. REGULATORY INFORMATION

National Regulations (US)

TSCA Inventory 8(b): Yes

SARA Title III Sec. 302/303 Extremely Hazardous Substances (40 CFR 355): No

SARA Title III Sec. 311/312 (40 CFR 370):

Hazard Category: • Acute Health Hazard, Chronic Health Hazard

• Threshold planning quantity – 10,000 lbs.

SARA Title III Sec. 313 Toxic Chemical Emissions Reporting (40 CFR 372): No

CERCLA Hazardous Substance (40CFR Part 302)

Listed: No

Unlisted Substance: No

State Component Listing: None identified

National Regulations (Canada):

Canadian NSN Registration: DSL

WHMIS Classification: D2B - Material causing other toxic effect.

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.

National Regulations (Europe)

EINECS #: 207-838-8

Labeling according to Directive 67/548/EEC.

Name of dangerous products- sodium carbonate

Symbols	Xi	Irritant
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Phrases	R36	Irritating to eyes.
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	S2	Keep out of reach of children.
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	S22	Do not breathe dust.
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		In case of contact with eyes, rinse
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	S26	immediately with
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		plenty of water and seek medical advice.
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16. OTHER INFORMATION

Ratings:

NFPA (NATIONAL FIRE PROTECTION ASSOCIATION)

Health = 2 Fire = 0 Instability = 0 Special = None

HMIS (HAZARDOUS MATERIAL INFORMATION SYSTEM)

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

Disclaimer:

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Material Safety Data Sheets

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