



VITUSA PRODUCTS™
INCORPORATED

MATERIAL SAFETY DATA SHEET

VITUSA PRODUCTS, INC.

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Product: Soda Ash (Sodium Carbonate)

Chemical: Soda Ash (Sodium Carbonate) NFPA: H=2 F=0 I=0 S=None
HMIS: H=2 F=0 R=0 PPE= Supplied by user;
dependent on conditions

MSDS Number: Sodaash 1104
Effective Date: 24 November 2004
Issued by: Vitusa Products, Inc. Regulatory Affairs Department

Not valid three years after effective date or after issuance of superseding MSDS, whichever is earlier. French or Spanish translations of this MSDS may be available.

Material Safety Data Sheets contain country specific regulatory information. Therefore, the MSDS's provided are for use only by customers of Vitusa Products, Inc. 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.

1. COMPANY AND PRODUCT IDENTIFICATION

- 1.1 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
EINECS Number: 207 838 8
Grades/Trade Names: Dense soda ash; chemical grade soda ash.
- 1.2 Recommended Uses:** Glass industry, chemical intermediates, metallurgy, soaps and detergents, pulp & paper, flue gas emissions, coal treatment, ion exchange
- 1.3 Supplier:** Vitusa Products, Inc.
343 Snyder Avenue
Berkeley Heights, NJ 07922
Phone (908) 665-2900
Fax (908) 665-2662
- 1.4 Emergency Telephone Numbers**
Emergencies (USA): 1 800 424 9300 (CHEMTREC®)
Transportation Emergencies (INTERNATIONAL/MARITIME): 1 703 527 3887 (CHEMTREC®)
Transportation Emergencies (CANADA): 1 613 996 6666 (CANUTEC)
Transportation Emergencies (MEXICO SETIQ): 01 800 00 214 00 (MEX. REPUBLIC)
525 559 1588 (Mexico City and metro area)

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2. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	FORMULA	WT. PERCENT	CAS #
Sodium Carbonate	Na ₂ CO ₃	99.8	497 19 8

3. HAZARDS IDENTIFICATION

Emergency Overview: Irritating to mucous membranes and eyes.

3.1 Route of Entry: Inhalation: Yes Skin: Yes Ingestion: Yes

3.2 Potential Effects of exposure: Irritating to mucous membranes and eyes. **Inhalation:** May be irritating to mucous membranes and eyes.

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

Skin contact: May cause skin irritation, seen as redness and swelling. In the presence of moisture or sweat, irritation may become more severe leading to rash. May cause dry and chapped skin.

Ingestion: May cause severe irritation and risk of burns to the mouth, throat, esophagus and stomach. Ingestion of large quantities can cause nausea and vomiting (bloody) abdominal cramps and diarrhea (bloody).

Carcinogenicity: See section 11.3

4. FIRST AID MEASURES

General Recommendations: Skin irritation may be aggravated in persons with existing skin lesions. Breathing of dust may aggravate asthma or other chronic pulmonary diseases.

4.1 Inhalation: Remove subject to a dust free environment and blow nose. If breathing is difficult or has stopped, administer artificial respiration. If any irritation is present, seek medical attention.

Eyes:

- In cases of splashing of concentrated solution in the eyes and face, treat the eyes first, and then continue first aid as defined under "contact with the skin."
- WITHOUT LOSS OF TIME: Rinse the eyes with running water for 15 minutes, maintaining the eyelids wide open to eliminate the product. Protect the eyes from strong light. Consult a physician or ophthalmologist in all cases. Transport subject to a medical facility.

Skin: Remove shoes and contaminated clothing, under a shower if necessary. Wash the affected area with luke warm water. Dry carefully. In case of persistent pain or reddening, consult a physician. Provide clean clothes.

Ingestion: SEEK MEDICAL ATTENTION.

If the subject is completely conscious:

- Do not induce vomiting.
- Remove any residue of the product from the person's mouth.

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4. FIRST AID MEASURES (CONTINUED)

- Give 8-12 ounces of water.

If the subject is unconscious:

- DO NOT ATTEMPT TO GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

5. FIRE FIGHTING MEASURES

5.1 Flash point: Non combustible.

5.2 Auto ignition Temperature: Not applicable.

5.3 Flammability Limits: Not applicable.

5.4 Unusual Fire and Explosion Hazards: None.

5.5 Extinguishing Methods

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

5.6 Fire Fighting Procedures: Not applicable.

6. ACCIDENTAL RELEASE MEASURES

6.1 Precautions: Avoid excessive dust.

6.2 Cleanup methods: Clean up uncontaminated material and recycle into process. Place unusable material into a closed, labeled container compatible with the product.

6.3 Precautions for protection of the environment:

- Clean up residual material by washing area with water.
- Do not flush to drain.
- Prevent material from entering public sewer systems or any waterways.
- Dispose of waste in accordance with applicable federal, state, and local environmental laws and regulations.

7. HANDLING AND STORAGE

7.1 Handling: Avoid prolonged or repeated contact with the skin or eyes. Do not wear contact lenses without proper eye protection when using this product. Avoid prolonged or repeated breathing of dusts. Use vacuum or wet mop to clean up dust.

7.2 Storage: Keep in a closed, properly labeled container in a dry area away from acids. Protect from physical damage.

7.3 Specific Uses: See Section 1.2.

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7. HANDLING AND STORAGE (CONTINUED)

7.4 **Other precautions:** None.

7.5 **Packaging:** Bulk railcar and truck; Paper+PE; Woven plastic material + PE coating; Woven plastic material + PE.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure Limit Values

	OSHA PEL	SAEL
Sodium Carbonate	Nuisance Dust	10mg/m ³
	5mg/m ³ (Respirable Fraction),	8 hour TWA
	15 mg/m ³ (Total Dust).	Total Dust

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SAEL is Solvay Acceptable Exposure Limit, Time Weighted Average for 8 hour workdays. No Specific TLV STEL (Short Term Exposure Level) has been set. Excursions in exposure level may exceed 3 times the TLV TWA for no more than a total of 30 minutes during a workday and under no circumstances should they exceed 5 times the TLV TWA.

8.2 Exposure Controls:

8.2.1 Occupational Exposure Controls:

8.2.1.1 Ventilation: In places with the possibility for creating excessive dust in excess of exposure limits, ventilation should be provided.

8.2.1.2 Respiratory protection: In case of significant or accidental dust emissions, a NIOSH/MSHA approved dust respirator should be worn.

8.2.1.3 Hand protection: Cotton gloves.

8.2.1.4 Eye protection: In cases of significant dust, dustproof goggles are recommended.

8.3 Other precautions:

- Chemical protective clothing in dusty areas.
- An eyewash and safety shower should be nearby and ready for use.
- Use good hygiene practices when handling this product including changing work clothes after use.
- Do not eat, drink or smoke in areas where this material is handled.

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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance: Granular solid.

Color: White.

Odor: Slightly pungent.

9.2 Important Health, Safety and Environmental information: pH: 11.6 (1% solution).

Change of state:

Melting point: 851 °C (1564 °F). Boiling point: Not Applicable.

Decomposition Temperature: Beginning at 400 °C (752 °F). **Flash Point:** Not Applicable.

Flammability: Not Applicable.
(solid, gas)

Explosive Properties: Not Applicable.

Oxidizing Properties: None; Mild corrosive.

Vapor Pressure: Not Applicable.

Relative Density:

Specific gravity (H₂O=1): 2.533 @ 25 °C (77 °F).

Solubility:

Water: 33% maximum by weight in water. Fat: Not Applicable.

Partition coefficient: P (n octanol/water): Not applicable.

Viscosity: Not Applicable.

Vapor Density (air=1): Not Applicable.

Evaporation Rate: Not Applicable.

9.3 Other Information: Bulk Density: 62.0 lbs/ft³ (1000 kg/m³).

10. STABILITY AND REACTIVITY

Stability: Stable at ambient temperature and atmospheric pressure.

10.1 Conditions to avoid:

- Hygroscopic; protect from moisture.
- Mixing of acid and sodium carbonate solutions could cause CO₂ evolution and severe splattering.

10.2 Materials and substances to avoid:

- Reacts with strong acids.
- Under certain conditions, may react with Al, P₂O₅, F₂, Li and 2, 4, 6 trinitrotoluene.

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10. STABILITY AND REACTIVITY (CONTINUED)

- Reacts with acids and releases large volumes of CO₂ gas and heat.
- Soda ash and lime dust in the presence of moisture may form caustic soda, which may cause burns.

10.3 Hazardous decomposition products: Carbon dioxide (CO₂) is evolved at very high temperatures (1000 °C, 1832 °F) or when mixed with acids.

10.4 Hazardous Polymerization: Not Applicable.

11. TOXICOLOGICAL INFORMATION

11.1 Acute toxicity:

Inhalation: LC₅₀, 2 hours, rat, 2.3 mg/l.

Oral: LD₅₀, rat, >2,000 mg/kg.

Dermal: LD₅₀, rabbit, >2,000 mg/kg.

Irritation: Rabbit, non irritant (skin). Rabbit, irritant (eyes).

11.2 Chronic toxicity: Inhalation, rat, Target Organ: lungs, 0.07 mg/l, observed effect. In vitro, no mutagenic effect. Oral route (gavage), various species, 179 mg/kg, 10 days, no teratogenic effect.

11.3 Carcinogenic Designation: None.

12. ECOLOGICAL INFORMATION

12.1 Acute ecotoxicity:

- Crustaceans, Daphnia magna, EC₅₀, 48 hours, 265 mg/l.
- Fishes, Lepomis macrochirus, LC₅₀, 96 hours, 300 mg/l.
- Algae, Nitzscheria linearis, EC₅₀, 5 day(s), 242 mg/l.

12.2 Chronic ecotoxicity: Phytoplankton, EC, biomass, 7 day(s), 14 mg/l.

12.3 Mobility: Considerable solubility and mobility.

12.4 Degradation

Abiotic:

- Water, hydrolysis. Degradation products: carbonate (pH.10/bicarbonate (pH 6_10)/carbonic acid/carbon dioxide (pH<6)).
- Soil_result: Not applicable (inorganic compound).

Biotic: Not Applicable (inorganic compound).

12.5 Potential for bioaccumulation: Log Po/w: Result _ Not Applicable (inorganic compound).

12.6 Other adverse effects /Comments: Observed effects are related to alkaline properties of product. Product is not significantly hazardous for the environment.

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13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment: Sodium Carbonate 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 an EPA-approved disposal facility in accordance with applicable national, state and local environmental laws and regulations.

13.2 Packaging treatment:

- 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.

13.3 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
Other	It is recommended that ERG guide # 111 be used for all non_DOT_regulated material.		
STCC#:	28_123_22		

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 pounds.

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

CERCLA Hazardous Substance (40 CFR Part 302)

Listed: No.

Unlisted Substance: No.

Characteristic: Not Applicable.

State Component Listing: None identified.

National Regulations (Canada)

Canadian DSL Registration: DSL.

WHMIS Classification: D2B — Material causing other toxic effects.

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15. REGULATORY INFORMATION (CONTINUED)

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*.

EEC Labeling: Name of dangerous product_sodium carbonate.

Symbols	Xi	Irritant.
Phrases R	36	Irritating to eyes.
Phrases S	(2)	Keep out of reach of children.
	22	Do not breathe dust.
	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Labeling "Dangerous for the environment". Not dangerous.

Provisional classification of WG from EU_DGXI_1/3_04_98.

16. OTHER INFORMATION

16.1 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

16.2 Other Information:

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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