

Material Safety Data Sheet

Soda Ash

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Soda Ash

Chemical Name Sodium Carbonate, Anhydrous

Synonyms Disodium carbonate, carbonic acid, disodium salt

Chemical Formula Na_2CO_3

Molecular Weight 105.99

CAS Number 497-19-8

Grade Names Technical grade soda ash, High Purity grade soda ash

General Use Glass manufacturing, chemical manufacturing, pulp and paper, water treatment and pH control, soap and detergent manufacturing, coal treatment, emission control, iron exchange resin regeneration.

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name CAS Number ENIECS Number Concentration

Sodium Carbonate 497.19-8 207-838-8 99.8 % by wt.

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3. HAZARDS IDENTIFICATION

Emergency Overview

White, odorless, granular solid

Exposure may cause irritation to eyes, skin, and respiratory tract

Product is non-combustible

Reacts with acids to form carbon dioxide gas and heat

Potential Health Effects

Inhalation

May cause upper respiratory tract, lung, and irritation to mucus membranes

Eye Contact

May cause severe irritation, redness, or swelling.

Skin Contact

May cause itching, redness, or swelling.

Ingestion

May cause gastrointestinal irritation, nausea, vomiting, or diarrhea.

Chronic Exposure

Product does not contain any ingredient designated by IARC, NTP, ACGIH, or OSHA as probable or suspected human carcinogens.

4. FIRST AID MEASURES

Eye Exposure

Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek immediate medical attention.

Skin Exposure

In case of contact, immediately wash with plenty of soap and water for at least 5 minutes. Seek medical attention if irritation develops or persists. Remove contaminated clothing and shoes. Clean contaminated clothing shoes before re-use

Inhalation

Remove victim from immediate source of exposure and assure that the victim is breathing. If breathing is difficult, administer oxygen, if available. If victim is not breathing, administer CPR

(cardio-pulmonary resuscitation). Seek immediate medical attention.

Ingestion

If victim is conscious and alert, give 1-2 glasses of water to drink. Do not give anything by mouth to an unconscious person. Seek immediate medical attention. Do not leave victim unattended.

5. FIRE FIGHTING MEASURES

Flash Point

Not Applicable

Extinguishing Media

Not combustible. Use extinguishing method suitable for surrounding fire

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Special Fire Fighting Procedures

Firefighters should wear full protective clothing and self-contained breathing apparatus.

Unusual Fire and Explosion Hazards:

Not combustible

Hazardous Decomposition Materials

Carbon Dioxide

6. ACCIDENTIAL RELEASE MEASURES

Evacuation Procedures and Safety

Ventilate closed spaces before entering. Wear appropriate protective gear for situation. See Personal Protection information in Section 8.

Containment of Spill:

Follow procedure described below under Cleanup and Disposal of Spill.

Cleanup and Disposal of Spill:

Scrape up and place in appropriate closed container (see Section 7: Handling and Storage).

Collect washings for disposal. Decontaminate tools and equipment following cleanup. Clean up residual material by washing area with water. Avoid creation of dusty conditions.

Environmental and Regulatory Reporting:

Do not flush to drain. If spilled on the ground, the affected area should be scraped clean placed in an appropriate container for disposal. Prevent material from entering public sewer system or any waterways. Large spills should be handled according to a predetermined plan. For assistance in developing a plan contact with the Technical Service Department using the Product Information phone number in Section 1.

7. HANDLING AND STORAGE

Minimum/Maximum Storage Temperatures:

Not Available

Handling

Do not get in eyes. Do not breathe dusts. Avoid direct or prolonged contact with skin.

Storage

Store in an area that is cool, dry, well-ventilated.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Introductory Remarks:

These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the Material Safety Data Sheet Date Prepared: 6/1/08 Supersedes Date: 1/31/06

need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations.

Assistance with selection, use and maintenance of worker protection equipment is generally

available from equipment manufacturers.

Exposure Guidelines:

Exposure limits represent regulated or recommended worker breathing zone concentrations measured by validated sampling and analytical methods, meeting OSHA requirements. The following limits (AGGIH, OSHA and other) apply to this material, where, if indicated, S=skin and C=ceiling limit:

PARTICULATES NOT OTHERWISE REGULATED RESPIRABLE FRACTION

Notes TWA STEL

OSHA 5 mg / cu m₃ NA

Engineering Controls:

Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures.

Respiratory Protection:

When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the latest OSHA standard (29 CFR 1910.134) and/or ANSI Z88.2 recommendations.

Under normal conditions, in the absence of other airborne contaminants, the following devices should provide protection from this material up to the conditions specified by OSHA / ANSI: Airpurifying (half-mask / full-face) respirator with cartridges / canister approved for use against dusts, mists and fumes.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product Information phone number in Section 1 for its exact specifications.

Physical Appearance: Melting Point Range:

White granules solid. 851° C (1564 F)

Odor: Boiling Point Range:

Odorless Not Available

pH: Vapor Density:

11.3 (1% solution) Not Available

Specific Gravity: Molecular Weight:

2.53 g/ml at 20° C (68 F) 105.99

10. STABILITY AND REACTIVITY

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Chemical Stability:

This material is stable under normal handling and storage conditions described in Section 7.

Conditions To Be Avoided:

Extreme Heat; Hygroscopic; protect from moisture. Mixing of acid and sodium carbonate solutions could cause CO₂ evolution.

Materials / Chemicals To Be Avoided:

Aluminum

Fluorine

Humid Air

Moisture

Sulfuric Acid

Acids

Magnesium

Phosphorus Pentoxide

Decomposition Temperature Range:

400° C (752 F)

The Following Hazardous Decomposition Products Might Be Expected:

Decomposition Type: Thermal

Carbon Dioxide

Hazardous Polymerization Will Not Occur.

Avoid The Following To Inhibit Hazardous Polymerization:

Not Applicable

11. TOXICOLOGICAL INFORMATION

Acute Eye Irritation:

Toxicological Information and Interpretation

Eye - Eye Irritation, 25 mg/Kg, Rabbit.

Severely Irritating; Muscle contraction or spasticity.

Acute Skin Irritation:

Toxicological Information and Interpretation

Skin – 500 mg/24 hour Skin Irritation, Rabbit.

Mildly Irritating.

Acute Dermal Toxicity:

LD₅₀. Rabbit: >2000 mg/kg

Acute Inhalation Toxicity:

Toxicological Information and Interpretation

LC₅₀ - Lethal Concentration. 50% Of Test Species, 2300 mg/cu m/2hr, rat.

Acute Oral Toxicity:

Toxicological Information and Interpretation

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LD₅₀ - Lethal Dose 50% Of Test Species, 4090 mg/kg, rat.

Chronic Toxicity:

This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be “probable” or “suspected” human carcinogens.

No additional test data found for product.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

No data found for product.

Chemical Fate Information:

No data found for product.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

Container Handling and Disposal:

Rinse containers before disposal.

EPA Hazardous Waste – NO

14. TRANSPORTATION INFORMATION

Transportation Status:

US Department of Transportation

DOT Shipping Name:

NOT REGULATED

15. REGULATORY INFORMATION

FEDERAL REGULATIONS

TSCA Inventory Status:

All ingredients of this product are listed on the TSCA Inventory.

SARA Title III Hazard Classes:

Fire Hazard - NO

Reactive Hazard - NO

Release of Pressure - NO

Acute Health Hazard - YES

Chronic Health Hazard - NO

STATE REGULATIONS:

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This product does not contain any components that are regulated under California Proposition 65.

16. OTHER INFORMATION

National Fire Protection Association Hazard Ratings - NFPA(R):

2 Health Hazard Rating - - Moderate

0 Flammability Rating - - Minimal

0 Reactivity Rating - - Minimal

National Paint & Coating Hazardous Materials Identification System - HMIS(R):

2 Health Hazard Rating - - Moderate

0 Flammability Rating - - Minimal

0 Reactivity Rating - - Minimal

Certified to ANSI/NSF 60 – Soda Ash Dense Bulk: This product is certified ANSI/NSF 60 when used in treatment of drinking water at maximum dosage of 100 mg/L.

Reason for Revisions:

Change and / or addition made to Section 1, 2, 11 and 16.

CANADIAN WHMIS REGULATIONS

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS: H=2 F=0 R=0

Key Legend Information:

NAV - Not Available

NAP - Not Applicable

ND - Not Determined

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

TLV - Threshold Limit Value

PEL - Permissible Exposure Limit

TWA - Time Weighted Average

STEL - Short Term Exposure Limit

NTP - National Toxicology Program

IARC - International Agency for Research on Cancer

WHMIS - Workplace Hazardous Materials Information System