

# MATERIAL SAFETY DATA SHEET

## Sodium Carbonate, Anhydrous



MSDS Ref. No.: 497-19-8

Date Approved: 01/26/2004

Revision No.: 6

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This document has been prepared to meet the requirements of the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200; the Canada's Workplace Hazardous Materials Information System (WHMIS) and, the EC Directive, 2001/58/EC.

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## 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Sodium Carbonate, Anhydrous

**ALTERNATE PRODUCT NAME(S):** Soda Ash, Sodium Carbonate Anhydrous

**GENERAL USE:** Glass manufacture, detergent manufacture, sodium chemicals and carbonate chemicals manufacture, pulp and paper, brine treatment, water hardness removal, pH adjustment in water or waste water, flue gas desulfurization, coal treatment, ion exchange resin regeneration.

This chemical is certified to ANSI/NSF Standard 60, Drinking Water Chemicals-Health Effects (as packaged in the original, unopened container). The maximum dosage level for this chemical is 150 mg/L.

### MANUFACTURER

FMC Wyoming Corporation  
Alkali Chemicals Division  
1735 Market Street  
Philadelphia, PA 19103  
(215) 299-6000 (General Information)

### EMERGENCY TELEPHONE NUMBERS

(800) 424-9300 (CHEMTREC - U.S.)  
(303) 595-9048 (Medical - Call Collect)  
(307) 872-2452 (Plant - Green River, WY)

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## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW:

- White, odorless, granular solid.
- Product is non-combustible.
- Reacts with acids to release carbon dioxide gas and heat.
- Irritating to the eyes and continuous contact may irritate the skin.
- Not expected to be toxic to the environment, nor to aquatic organisms.

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**POTENTIAL HEALTH EFFECTS:** Direct contact with the product causes irritation of the eyes and continuous contact may cause skin irritation (red, dry, cracked skin). Excessive levels of airborne dust may irritate the mucous membranes and upper respiratory tract.

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### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Wt. %	EC No.	EC Class
Sodium carbonate	497-19-8	99.8	207-838-8	Xi, R36

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### 4. FIRST AID MEASURES

**EYES:** Immediately flush with water for at least 15 minutes, lifting the upper and lower eyelids intermittently. See a medical doctor or ophthalmologist as necessary.

**SKIN:** Wash with plenty of soap and water. Get medical attention if irritation occurs and persists.

**INGESTION:** Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. See a medical doctor immediately.

**INHALATION:** Remove to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.

**NOTES TO MEDICAL DOCTOR:** While internal toxicity is low, irritant effects of high concentrations may produce corneal opacities, and vesicular skin reactions in humans with abraded skin only. Treatment is symptomatic and supportive.

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### 5. FIRE FIGHTING MEASURES

**EXTINGUISHING MEDIA:** Water, water fog, carbon dioxide (CO<sub>2</sub>), dry chemical

**FIRE / EXPLOSION HAZARDS:** Not applicable

**FIRE FIGHTING PROCEDURES:** Wear full protective clothing and self-contained breathing apparatus.

**FLAMMABLE LIMITS:** Not applicable

**HAZARDOUS COMBUSTION PRODUCTS:** Fumes of sodium oxide.

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**SENSITIVITY TO IMPACT:** None

**SENSITIVITY TO STATIC DISCHARGE:** None

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## 6. ACCIDENTAL RELEASE MEASURES

**COMMENTS:** PERSONAL PRECAUTIONS: Refer to Section 8 "Exposure Controls / Personal Protection".

**CONTAINMENT:** Prevent large quantities of this product from contacting vegetation or waterways; large spills could kill vegetation and fish.

**CLEAN-UP:** This product, if spilled, can be recovered and re-used if contamination does not present a problem. Vacuum or sweep up the material. If the spilled product is unusable due to contamination, consult state or federal environmental agencies for acceptable disposal procedures and locations. See Section 13 "Disposal Considerations".

**NOTIFICATION REQUIREMENTS:** Federal regulations do not require notification for spills of this product. State and local regulations may contain different requirements; consult local authorities.

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## 7. HANDLING AND STORAGE

**HANDLING:** Use air conveying / mechanical systems for bulk transfer to storage. For manual handling or bulk transfer use mechanical ventilation to remove airborne dust from rail car, ship or truck. Use approved respiratory protection when ventilation systems are not available. Selection of respirators is based on the dust cloud generation. Keep material out of lakes, streams, ponds and sewer drains.

**STORAGE:** Store in a cool dry area, away from acids.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Where possible, provide general mechanical and/or local exhaust ventilation to prevent release of airborne dust into the work environment.

### PERSONAL PROTECTIVE EQUIPMENT

**EYES AND FACE:** Appropriate eye and face protection equipment (ANSI Z87 approved) should be selected for the particular use intended for this material. Safety glasses with side shields are recommended.

**RESPIRATORY:** Whenever dust in the worker's breathing zone cannot be controlled with ventilation or other engineering means, workers should wear respirators or dust masks approved by

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NIOSH/MSHA, EU CEN or comparable certification organization to protect them against airborne dust.

**PROTECTIVE CLOTHING:** Dry product is generally non-irritating to intact skin. However, this product can be irritating where skin has been damaged and can create skin irritation after long exposures when moisture is present. Under such conditions, gloves and long-sleeved clothing are recommended to minimize skin contact.

### COMMENTS:

#### ADDITIONAL EXPOSURE GUIDELINES:

Federal guidelines treat the ingredient(s) in this product as a nuisance dust, as no product-specific guidelines have been issued for exposure. As with all nuisance dusts, worker breathing zone concentrations should be measured by validated sampling and analytical methods. The following limits (OSHA and MSHA) apply to this material:

Particulates Not Otherwise Regulated:  
 OSHA (PEL / TWA): 15 mg/m<sup>3</sup> (total dust); 5 mg/m<sup>3</sup> (resp fraction)  
 MSHA (PEL / TWA): 10 mg/m<sup>3</sup> (total dust)

The information noted above provides general guidance for handling this product. Specific work environments and material handling practices will dictate the selection and use of personal protection equipment (PPE).

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>ODOR:</b>	Odorless
<b>APPEARANCE:</b>	White, granular solid.
<b>AUTOIGNITION TEMPERATURE:</b>	Not applicable
<b>BOILING POINT:</b>	Decomposes
<b>COEFFICIENT OF OIL / WATER:</b>	Not applicable
<b>DENSITY / WEIGHT PER VOLUME:</b>	(g/ml) Dense Grades = 0.86 - 1.12; Light Grades = 0.70 - 0.90
<b>EVAPORATION RATE:</b>	Not applicable (Butyl Acetate = 1)
<b>FLASH POINT:</b>	Non-combustible
<b>FREEZING POINT:</b>	851°C (1564°F)
<b>ODOR THRESHOLD:</b>	Not applicable
<b>OXIDIZING PROPERTIES:</b>	Not applicable
<b>PERCENT VOLATILE:</b>	Not applicable

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**pH:** 11.4 (1% solution)  
**SOLUBILITY IN WATER:** 33.2 % maximum  
**SPECIFIC GRAVITY:** 2.509 (water = 1)  
**VAPOR DENSITY:** Not Applicable  
**VAPOR PRESSURE:** Not applicable

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## 10. STABILITY AND REACTIVITY

**CONDITIONS TO AVOID:** Contact with acids except under controlled conditions.

**STABILITY:** Stable

**POLYMERIZATION:** Will not occur

**INCOMPATIBLE MATERIALS:** Reacts with acids with release of large volumes of carbon dioxide gas and heat.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Heated to decomposition, it emits fumes of sodium oxide.

**COMMENTS:**  
Materials to Avoid : Aluminum powder, acids, fluorine, molten lithium

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## 11. TOXICOLOGICAL INFORMATION

**EYE EFFECTS:** Severe irritant (rabbit) [Toxicology 23:281 (1982)]

**SKIN EFFECTS:** Non-irritating to intact skin. Minor irritation may occur on abraded skin. [Toxicol. Appl. Pharmacol. 31:481 (1975)]

**DERMAL LD<sub>50</sub>:** No data available for the product.

**ORAL LD<sub>50</sub>:** 4,090 mg/kg (rat) [RTECS 1986]

**INHALATION LC<sub>50</sub>:** 2.3 mg/l (2 h) (rat) [Environ, Res. 31:138 (1983)]

**SENSITIZATION:** 0.25% sodium carbonate: Non-sensitizing (human) [Toxicol. Appl. Pharmacol. 31:481 (1975)]

**TARGET ORGANS:** Eyes

**ACUTE EFFECTS FROM OVEREXPOSURE:** May cause severe irritation of the eyes, including corneal opacities. Dusts and mists may be irritating to the skin, mucous membranes and upper respiratory tract. No significant acute toxicological effects expected.

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**CHRONIC EFFECTS FROM OVEREXPOSURE:** No data available for the product.

**CARCINOGENICITY:**

**NTP:** Not listed  
**IARC:** Not listed  
**OSHA:** Not listed  
**OTHER:** (ACGIH) Not listed

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## 12. ECOLOGICAL INFORMATION

**ECOTOXICOLOGICAL INFORMATION:** 96-hour  $LC_{50}$  = 265 - 565 mg/L (daphnia magna) (low toxicity)  
96-hour  $LC_{50}$  = 300 - 320 mg/L (bluegill sunfish) (low toxicity)

**CHEMICAL FATE INFORMATION:** Biodegradability does not apply to inorganic substances. No significant toxicity to aquatic organisms is expected.

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## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** When this product is discarded or disposed of, as purchased, it is neither a characteristic nor a listed hazardous waste according to US Federal RCRA regulations (40 CFR 261). As a non-hazardous waste the material may be disposed of in a landfill in accordance with government regulations; check local or state regulations for applicable requirements prior to disposal. Any processing, usage, alteration, chemical additions to, or contamination of, the product may alter the disposal requirements. Under Federal regulations, it is the generator's responsibility to determine if a waste is a hazardous waste.

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## 14. TRANSPORT INFORMATION

**U.S. DEPARTMENT OF TRANSPORTATION (DOT)**

**PROPER SHIPPING NAME:** Not regulated  
**PRIMARY HAZARD CLASS / DIVISION:** Not applicable  
**UN/NA NUMBER:** None  
**LABEL(S):** Not applicable

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**PLACARD(S):** Not applicable  
**MARKING(S):** Not applicable  
**ADDITIONAL INFORMATION:** Hazardous Substance/RQ: Not applicable  
49 STCC Number: Not applicable

**INTERNATIONAL MARITIME DANGEROUS GOODS (IMDG)**

**ADDITIONAL INFORMATION:** Not regulated

**ADR - EUROPEAN AGREEMENT CONCERNING THE  
INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD**

**ADDITIONAL INFORMATION:** Not regulated

**INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO) /  
INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)**

**ADDITIONAL INFORMATION:** Not regulated

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**15. REGULATORY INFORMATION****UNITED STATES****SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

**SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355, APPENDIX A):**  
Not listed

**SECTION 311 HAZARD CATEGORIES (40 CFR 370):**

Immediate (Acute) Health Hazard

**SECTION 312 THRESHOLD PLANNING QUANTITY (40 CFR 370):**

The Threshold Planning Quantity (TPQ) for this product, if treated as a mixture, is 10,000 lbs;  
however, this product contains the following ingredients with a TPQ of less than 10,000 lbs.:  
None

**SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372):**

Not listed

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**CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT)****CERCLA DESIGNATION & REPORTABLE QUANTITIES (RQ) (40 CFR 302.4):**

Not listed

**TSCA (TOXIC SUBSTANCE CONTROL ACT)****TSCA INVENTORY STATUS (40 CFR 710):**

Listed

**RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)****RCRA IDENTIFICATION OF HAZARDOUS WASTE (40 CFR 261):**

Waste Number: Refer to Section 13 "Disposal Considerations" for RCRA status.

**CANADA****WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM):**

Product Identification Number: Not applicable  
Hazard Classification / Division: Toxic, Class D, Div. 2, Subdiv. B  
Ingredient Disclosure List: Listed

**E NUMBERS:**

E 500

**EU EINECS NUMBERS:**

011-005-00-2

**INTERNATIONAL LISTINGS**

Australia (AICS): Listed  
Korea: KE-31380  
Japan (ENCS): (1)-164  
Philippines (PICCS): Listed  
China: Listed

**COMMENTS:**

CLEAN WATER ACT (CWA) - SECTION 307 / 311

Not listed as a hazardous pollutant (40 CFR 116), nor as a toxic pollutant (40 CFR 401.15)

CLEAN AIR ACT (CAA) - SECTION 112

Not regulated under the chemical accident prevention provisions (40 CFR 68)

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## 16. OTHER INFORMATION

### HAZARD, RISK AND SAFETY PHRASE DESCRIPTIONS:

#### Sodium carbonate:

EC Symbols: Xi (Irritant)

EC Risk Phrases: R36 (Irritating to eyes.)

EC Safety Phrases: S2 (Keep out of the reach of children.)  
 S22 (Do not breathe dust.)  
 S26 (In case of contact with eyes, rinse immediately with plenty of water and seek medical advice)

### HMIS

Health	2
Flammability	0
Physical Hazard	0
Personal Protection (PPE)	B

Protection = B (Safety glasses and gloves)

HMIS = Hazardous Materials Identification System

#### Degree of Hazard Code:

4 = Severe  
 3 = Serious  
 2 = Moderate  
 1 = Slight  
 0 = Minimal

### NFPA

Health	2
Flammability	0
Reactivity	0
Special	None

No special requirements

NFPA = National Fire Protection Association

#### Degree of Hazard Code:

4 = Extreme  
 3 = High  
 2 = Moderate  
 1 = Slight  
 0 = Insignificant

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Changes in information are as follows:

New Format, as well as text changes and/or updates to one or more Sections of this MSDS.

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