Univar USA Inc.
6100 Carillon Point
Kirkland, WA 98033
(425) 889-3400

For Emergency Assistance involving chemicals call - CHEMTREC (800) 424-9300

==========

The Version Date for this MSDS is : 11/13/2002

PRODUCT NAME: SODIUM CARBONATE / SODA ASH

MSDS NUMBER: FZ000018

EFFECTIVE DATE: 09/10/1998

SUPERSEDES: 07/18/1996

ISSUED BY: 008418

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

DISTRIBUTED BY UNIVAR USA INC.
6100 CARILLON POINT
KIRKLAND, WA 98033
425 889-3400

PRODUCT NAME: Sodium Carbonate, Anhydrous
SYNONYM(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. The maximum dosage level for this chemical is 150 mg/L.

Emergency Telephone Numbers:
CHEMTREC (800) 424-9300

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Wt.%
Sodium carbonate	497-19-8	99.8

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
IMMEDIATE CONCERNS: White, granular solid. Product is non-combustible. Reacts with acids to release carbon dioxide gas and heat. Irritating to the

eyes. Continuous contact may irritate skin.
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.

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 immediately.
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.

5. FIRE FIGHTING MEASURES

FLAMMABLE LIMITS: Not applicable
EXTINGUISHING MEDIA: Water, water fog, carbon dioxide (CO_2), dry chemical
HAZARDOUS COMBUSTION PRODUCTS: Fumes of sodium oxide.
EXPLOSION HAZARDS: Not applicable
FIRE FIGHTING PROCEDURES: Wear full protective clothing and self-contained breathing apparatus.
AUTOIGNITION TEMPERATURE: Not applicable
PROPERTIES CONTRIBUTING TO FLAMMABILITY: Not applicable
FLASH POINT: Non-combustible
SENSITIVITY TO STATIC DISCHARGE: None
SENSITIVITY TO IMPACT: None
HAZARDOUS DECOMPOSITION PRODUCTS: Heated to decomposition, it emits fumes of sodium oxide.

6. ACCIDENTAL RELEASE MEASURES

GENERAL PROCEDURES: Sweep up and recycle into process if contamination does not present a problem. Use appropriate protective equipment if dust is generated or contact with eyes or skin is expected. Flush residues and liquid to holding area for neutralization before discharge.

7. HANDLING AND STORAGE

HANDLING: Use air conveying/mechanical systems for bulk transfer to storage. For manual handling of bulk transfer use mechanical ventilation to remove airborne dust from railcar, ship or truck. Use approved respiratory protection when ventilation systems are not available. Selection of respirators is based on the dust cloud generated.
STORAGE: Store in a cool dry area, away from acids.
COMMENTS: Provide general mechanical and/or local exhaust ventilation to prevent release of airborne dust into the work environment. Approved

respiratory protection should be used when airborne dust is expected to be released.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Minimize eye and skin contact by using appropriate protective equipment. Use local or general room ventilation to control airborne dust that may be generated into the work environment.
PERSONAL PROTECTIVE EQUIPMENT
EYES AND FACE: Use cup type chemical goggles.
RESPIRATORY: Use approved dust respirator for low levels of airborne dust. High concentrations may require air supplied systems.
PROTECTIVE CLOTHING: Use impervious gloves to prevent skin contact, arm protectors and aprons. If clothing becomes contaminated, remove and launder before reuse. Industrial safety shoes.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR: Odorless
APPEARANCE: White, granular solid.
pH: (1% solution): 11.4
PERCENT VOLATILE: Not applicable
VAPOR PRESSURE: Not applicable
VAPOR DENSITY: Not Applicable
BOILING POINT: Decomposes
FREEZING POINT: 851 C (1564 F)
SOLUBILITY IN WATER: 33.2 % maximum
EVAPORATION RATE: (Butyl Acetate = 1) Not applicable
DENSITY: Dense Grades = 0.86 - 1.12; Light Grades = 0.70 - 0.90
SPECIFIC GRAVITY: 2.509 (water = 1)
COEFF. OIL/WATER: Not applicable
ODOR THRESHOLD: Not applicable
OXIDIZING PROPERTIES: Not applicable

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Contact with acids except under controlled conditions.
STABILITY: Stable
POLYMERIZATION: Will not occur
HAZARDOUS DECOMPOSITION PRODUCTS: None
INCOMPATIBLE MATERIALS: Reacts with acids with release of large volumes of carbon dioxide gas and heat.
COMMENTS: Materials to Avoid : Aluminum powder, acids, fluorine, molten lithium

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 LD50: No data available for the product.
ORAL LD50: 4090 mg/kg (rat) RTECS 1986
INHALATION LC50: 2.3 mg/L (rat, 2 hr) Environ, Res. 31:138 (1983)
SENSITIZATION: Non-sensitizing (humans, 0.25% sodium carbonate) 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.
CHRONIC EFFECTS FROM OVEREXPOSURE: No data available for the product.
CARCINOGENICITY:
IARC: Not listed
NTP: Not listed
OSHA: Not listed
OTHER: (ACGIH) Not listed

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: Daphnia Magna 96 hr LC50 = 265 - 565 mg/L Bluegill Sunfish 96 hr LC50 = 300 - 320 mg/L
CHEMICAL FATE INFORMATION: Biodegradability does not apply to inorganic substances.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Salvage as much material as possible and return to process if contamination does not present a problem. Dispose in an accepted landfill in accordance with accepted governmental regulations.

14. TRANSPORT INFORMATION

U.S. DOT (DEPARTMENT OF TRANSPORTATION)
PROPER SHIPPING NAME: Not regulated
PRIMARY HAZARD CLASS/DIVISION: Not applicable
UN/NA NUMBER: None
PLACARDS: Not applicable
LABEL: Not applicable
OTHER SHIPPING INFORMATION:
DOT Marking: Not applicable
Hazardous Substance/RQ: Not applicable
49 STCC Number: Not applicable
SPECIAL SHIPPING NOTES: IMDG: Not regulated
IATA: Not regulated

15. REGULATORY INFORMATION

UNITED STATES
SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)
SECTION 311 HAZARD CATEGORY (40 CFR 370):
Immediate (Acute) Health Hazard
SECTION 312 THRESHOLD PLANNING QUANTITY (40 CFR 370): 10000 lbs.
SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372): Not listed
SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355): Not listed
CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT)
CERCLA REGULATORY (40 CFR 302.4): Not applicable
TSCA (TOXIC SUBSTANCE CONTROL ACT)
TSCA STATUS (40 CFR 710): Listed
CANADA
WHMIS (WORKER HAZARDOUS MATERIALS INFORMATION SYSTEM): Product Identification Number: Not applicable

Hazard Classification: Toxic, Class D, Div. 2, Subdiv. B
Ingredient Disclosure List: Listed

16. OTHER INFORMATION

HMIS RATING
HEALTH: 2
FLAMMABILITY 0
REACTIVITY: 0
PROTECTION: J

NFPA RATING
HEALTH: 2
FLAMMABILITY 0
REACTIVITY: 0
SPECIAL: None

Key
4 = Severe
3 = Serious
2 = Moderate
1 = Slight
0 = Minimal
HMIS RATINGS NOTES:
Protection = J (Safety goggles, gloves, apron & combination dust & vapor respirator)
The contents and format of this MSDS are in accordance with OSHA Hazard Communication Standard and Canada's Workplace Hazardous Information System (WHMIS).
National Fire Protection Association (NFPA)
Hazardous Materials Identification System (HMIS)

For Additional Information:
Contact: MSDS Coordinator - Univar USA
During business hours, Pacific Time - (425) 889-3400

NOTICE
Univar USA, expressly disclaims all express or implied warranties of merchantibility and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information refer to a Product Specification Sheet and/or a Certificate of Analysis. These can be obtained from your local Univar USA Sales Office.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Univar USA makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Univar USA's control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

END OF MSDS