



MATERIAL SAFETY DATA SHEET

Product Name: Ram pH Plus

4949 Greenhouse Road Houston, TX 77084-2205

281/856-7600 - 800/456-3459 - Fax 281/856-7015

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.

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

Ram Chemical & Supply, Inc.
4949 Greenhouse Road
Houston, TX 77084-2205

EMERGENCY TELEPHONE NUMBERS

(307) 872-2452 (Plant - Green River, WY)
(303) 595-9048 (Medical - Call Collect)

For leak, fire, spill, or accident emergencies, call:
(800) 424-9300 (CHEMTREC - U.S.A. & Canada)

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.

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.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Wt.%	EC No.	EC Class
Sodium carbonate	497-19-8	99.8	207-838-8	R36; S2-22-26

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.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Water, water fog, carbon dioxide (CO₂), 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.

SENSITIVITY TO IMPACT: None

SENSITIVITY TO STATIC DISCHARGE: None

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.

7. HANDLING AND STORAGE

HANDLING: Use air conveying / mechanical systems for bulk transfer to storage. For manual handling o 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.

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

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/m³ (total dust); 5 mg/m³ (resp fraction)

MSHA (PEL / TWA): 10 mg/m³ (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

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

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

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	

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: 4,090 mg/kg (rat) [RTECS 1986]

INHALATION LC₅₀: 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.

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

CARCINOGENICITY:

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

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: 96-hour LC₅₀ = 265 - 565 mg/L (daphnia magna) (low toxicity)
96-hour LC₅₀ = 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.

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.

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

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

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

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: D.2.B, E

Ingredient Disclosure List: Listed

Domestic Substance List: Listed

E NUMBERS:

E 500

EU EINECS NUMBERS:

011-005-00-2

INTERNATIONAL LISTINGS

Australia (AICS): Listed

China: Listed

Japan (ENCS): (1)-164

Korea: KE-31380

Philippines (PICCS): Listed

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)

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)

16. OTHER INFORMATION**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

REVISION SUMMARY:

This MSDS replaces Revision #6, dated January 26, 2004.

Changes in information are as follows:

Section 15 (Regulatory Information)

Section 16 (Other Information)

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