

# MATERIAL SAFETY DATA SHEET

## Sodium Bicarbonate

MSDS Ref. No: 144-55-8  
Version: US/Canada  
Date Approved: 08/18/2000  
Revision No: 1

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### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Sodium Bicarbonate  
**SYNONYM(s):** Baking Soda, Bicarbonate of Soda  
**GENERAL USE:** Leavening agent, cleaner ingredient, bath salt ingredient, water softener, diaper rinse ingredient, feed additive.

This chemical is certified to ANSI/NSF Standard 60, Drinking Water Chemicals-Health Effects. The maximum dosage level for this chemical is 100 mg/L.

#### MANUFACTURER

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

#### Emergency Telephone Numbers:

**CHEMTREC** (800) 424-9300  
**Emergency Phone** (303)595-9048  
(Medical - call collect)  
**Emergency Phone** (307) 875-2580  
(Green River, WY-call collect)

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### 2. COMPOSITION / INFORMATION ON INGREDIENTS

| <u>Chemical Name</u> | <u>CAS #</u> | <u>Wt.%</u> |
|----------------------|--------------|-------------|
| Sodium Bicarbonate   | 144-55-8     | 100         |

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### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

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

**POTENTIAL HEALTH EFFECTS:** No significant health effects anticipated.

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## 4. FIRST AID MEASURES

**EYES:** Flush with plenty of water. Get medical attention if irritation occurs and persists.

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

**INGESTION:** Drink plenty of water. Never give anything by mouth to an unconscious person. If any discomfort persists, obtain medical attention.

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

**NOTES TO MEDICAL DOCTOR:** Internal toxicity is low. Treatment is symptomatic and supportive.

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## 5. FIRE FIGHTING MEASURES

**FLASH POINT AND METHOD:** Non-combustible

**FLAMMABLE LIMITS:** Not applicable

**AUTOIGNITION TEMPERATURE:** Not applicable

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

**HAZARDOUS COMBUSTION PRODUCTS:** None

**FIRE / EXPLOSION HAZARDS:** None

**FIRE FIGHTING PROCEDURES:** None

**SENSITIVITY TO STATIC DISCHARGE:** None

**SENSITIVITY TO IMPACT:** None

**HAZARDOUS DECOMPOSITION PRODUCTS:** None

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## 6. ACCIDENTAL RELEASE MEASURES

**GENERAL PROCEDURES:** Sweep up as much as possible for salvage or disposal. Wash away residue with water.

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## 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:** Use general room dilution or local exhaust ventilation when excessive dust is expected in the work environment.

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## 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:** Chemical goggles

**RESPIRATORY:** Wear MSHA-NIOSH approved dust respirator or dust mask if visible dust levels are experienced or anticipated.

**PROTECTIVE CLOTHING:** General purpose gloves. Full cover clothing.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**ODOR:** Odorless

**APPEARANCE:** White, granular solid.

**pH:** (1% solution): 8.3

**PERCENT VOLATILE:** Not available

**VAPOR PRESSURE:** Not available

**VAPOR DENSITY:** (Air = 1): Not applicable

**BOILING POINT:** Not applicable

**MELTING POINT:** Decomposes

**SOLUBILITY IN WATER:** % by wt. @ 20°C (68°F): 9.0

**EVAPORATION RATE:** (Butyl Acetate = 1) Not applicable

**DENSITY:** 0.88 g/mL

**SPECIFIC GRAVITY:** (H<sub>2</sub>O = 1) 2.20

**COEFF. OIL/WATER:** Not available  
**ODOR THRESHOLD:** Not applicable  
**OXIDIZING PROPERTIES:** 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

**HAZARDOUS DECOMPOSITION PRODUCTS:** None

**INCOMPATIBLE MATERIALS:** Reacts with acids to release carbon dioxide gas and heat.

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## 11. TOXICOLOGICAL INFORMATION

**EYE EFFECTS:** Non-irritating (rabbit) J. Amer. Coll. Toxicol. 1987

**SKIN EFFECTS:** Non-irritating (rabbit) J. Amer. Coll. Toxicol. 1987

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

**ORAL LD<sub>50</sub>:** 4300 mg/kg (rat) (20% slurry)

6000 mg/kg (rat) (50% slurry)

Gosselin, Smith & Hodge, Clinical Tox. of Comm. Products, 1984

**INHALATION LC<sub>50</sub>:** No data available for the product.

**TARGET ORGANS:** None

**ACUTE EFFECTS FROM OVEREXPOSURE:** Sodium bicarbonate is a GRAS (Generally Recognized As Safe) food ingredient. No significant toxicity is expected.

**CHRONIC EFFECTS FROM OVEREXPOSURE:**

Administration of large doses of sodium bicarbonate to patients with renal insufficiency can produce systemic alkalosis.

### CARCINOGENICITY:

IARC: Not listed

NTP: Not listed

OSHA: Not listed

OTHER: (ACGIH) Not listed

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## 12. ECOLOGICAL INFORMATION

**ECOTOXICOLOGICAL INFORMATION:** 48 hr LC50 = 2000 mg/L (Culex sp. larvae or mosquito)

**CHEMICAL FATE INFORMATION:** No data available for the product.

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## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** If material cannot be salvaged, an acceptable method is to dispose of uncontaminated product into a secured landfill in accordance with all local, state and federal environmental regulations. Empty containers may be incinerated or discarded as general trash.

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## 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

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## 15. REGULATORY INFORMATION

### UNITED STATES

### SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

**SARA TITLE III SECTION 302 EXTREMELY**

**HAZARDOUS SUBSTANCES (40 CFR 355):** Not listed

**SECTION 311 HAZARD CATEGORY (40 CFR 370):** Not applicable

**SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372):** 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 (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM):** Product Identification No.: None  
Hazard Classification: None  
Ingredient Disclosure List: Not listed

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## 16. OTHER INFORMATION

**REVISION SUMMARY** Revision #: 1

This MSDS replaces the August 01, 1997 MSDS. Any changes in information are as follows:

No changes made, periodic review.

| HMIS RATING  |   |
|--------------|---|
| HEALTH:      | 0 |
| FLAMMABILITY | 0 |
| REACTIVITY:  | 0 |
| PROTECTION:  | E |

| NFPA RATING  |      |
|--------------|------|
| HEALTH:      | 0    |
| FLAMMABILITY | 0    |
| REACTIVITY:  | 0    |
| SPECIAL:     | None |

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

**HMIS RATINGS NOTES:**

Protection = E (Safety glasses, gloves, dust 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)