Material Safety Data Sheet
Sodium Bicarbonate

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Sodium Bicarbonate
Pure substance/preparation: Substance
Formula: NaHCO3
Synonyms: Baking Soda, Bicarbonate of Soda

Recommended use: Leavening agent, cleaner ingredient, bath salt ingredient, water softener, diaper rinse ingredient, feed additive.

Manufacturer: FMC Wyoming Corporation
Alkali Chemicals Division
1735 Market Street
Philadelphia, PA 19103

Emergency telephone number
+1 307.872.2452 (Plant - Green River, WY)
+1 303.595.9048 (Medical - Call Collect)
For leak, fire, spill or accident emergencies, call:
+1 800.424.9300 (CHEMTREC - U.S.A.)
+1 703.527.3887 (CHEMTREC - Collect - All Other Countries)

MSDS #: 144-55-8
Revision Date: 2010-09-29
Version 1

This MSDS has been prepared to meet U.S. OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada’s Workplace Hazardous Materials Information System (WHMIS) requirements.

2. Hazards identification

Emergency Overview
Not classified as hazardous
White crystalline powder

Potential health effects

Acute toxicity: No significant health effects anticipated
Chronic Toxicity: No known effect.

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Bicarbonate</td>
<td>144-55-8</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
4. First aid measures

Eye contact
Flush eyes with water as a precaution. Get medical attention if irritation develops and persists.

Skin contact
Wash skin with soap and water. Get medical attention if irritation develops and persists.

Inhalation
Remove person to fresh air. If signs/symptoms continue, get medical attention.

Ingestion
Drink plenty of water. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

5. Fire-fighting measures

Flammable properties
Noncombustible.

Flash Point
Not combustible

Suitable extinguishing media
Water spray, dry chemical, carbon dioxide (CO₂), or foam.

Hazardous combustion products
None.

Explosion Data
Sensitivity to Mechanical Impact
Not sensitive.

Sensitivity to Static Discharge
Not sensitive.

Specific hazards arising from the chemical
None in particular.

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Stability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

NFPA/HMIS Ratings Legend
Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0

6. Accidental release measures

Personal precautions
Avoid dust formation.

Methods for containment
Material may be recycled when contamination is not a problem.

Methods for cleaning up
Sweep up and shovel into suitable containers for disposal. Dispose of in accordance with all applicable national environmental laws and regulations.

7. Handling and storage

Handling
Use air conveying/mechanical systems for bulk transfer to storage. Provide appropriate exhaust ventilation at places where dust is formed. In case of insufficient ventilation, wear suitable respiratory equipment.

Storage
Keep in a dry, cool and well-ventilated place. Keep away from heat. Keep away from incompatible products (acids).

Specific use(s)
None known

8. Exposure controls/personal protection

Exposure guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. Local nuisance dust standards apply.
Owenalional exposure controls

Engineering measures Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Personal protective equipment

General Information If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers. These recommendations apply to the product as supplied.

Respiratory protection 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 organization to protect against airborne dust.

Eye/face protection Safety glasses with side-shields

Skin and body protection Wear suitable protective clothing. Protective shoes or boots.

Hand protection Protective gloves

Hygiene measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>crystalline powder</td>
</tr>
<tr>
<td>Color</td>
<td>white</td>
</tr>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Odor</td>
<td>odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>8.3 (1% solution) @ 25 °C</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>Decomposes</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>not applicable</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not combustible</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>not applicable</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>not applicable</td>
</tr>
<tr>
<td>Flammable properties</td>
<td>Noncombustible</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>not applicable</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
</tr>
<tr>
<td>Density</td>
<td>0.88 g/cm³ (particle)</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>2.22</td>
</tr>
<tr>
<td>Relative density</td>
<td>No information available</td>
</tr>
<tr>
<td>Bulk density</td>
<td>66 lb/cu ft</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>84.01</td>
</tr>
<tr>
<td>Water solubility</td>
<td>9.0 % @ 20 °C</td>
</tr>
<tr>
<td>Percent volatile</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient:</td>
<td>not applicable</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No information available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

Stability Stable
Sodium Bicarbonate

Conditions to avoid
Excessive heat

Materials to avoid
Except under controlled conditions: Acids

Hazardous decomposition products
Reacts with acids to release carbon dioxide gas and heat

Hazardous polymerization
Hazardous polymerization does not occur

11. Toxicological information

Acute effects

LD50 Oral
20% slurry: 4,300 mg/kg (rat)
50% slurry: 6,000 mg/kg (rat)

LD50 Dermal
No information available

LC50 Inhalation:
No information available

Hazardous polymerization does not occur

Ecotoxicity
Not expected to have significant environmental effects

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish</th>
<th>Toxicity to microorganisms</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Bicarbonate</td>
<td>650 mg/L EC50 120 h (Nitzschia linearis)</td>
<td>LC50 8250-9000 mg/L</td>
<td>Lepomis macrochirus 96 h</td>
<td>EC50 2350 mg/L 48 h</td>
</tr>
</tbody>
</table>

Persistence and degradability
Biodegradability does not pertain to inorganic substances.

Bioaccumulation
Does not bioaccumulate.

Mobility
Dissociates into ions.

12. Ecological information

13. Disposal considerations

Waste disposal methods
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging
Dispose of in accordance with local regulations.
14. Transport information

- **DOT**
  - not regulated

- **TDG**
  - not regulated

- **ICAO/IATA**
  - not regulated

- **IMDG/IMO**
  - not regulated

15. Regulatory information

**International Inventories**

- **TSCA Inventory (United States of America)**
  - Complies

- **DSL (Canada)**
  - Complies

- **NDSL (Canada)**
  - Complies

- **EINECS/ELINCS (Europe)**
  - Complies

- **ENCS (Japan)**
  - Complies

- **IECSC (China)**
  - Complies

- **KECL (Korea)**
  - Complies

- **PICCS (Philippines)**
  - Complies

- **AICS (Australia)**
  - Complies

- **NZIoC (New Zealand)**
  - Complies

**U.S. Federal Regulations**

- **SARA 313**
  - Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

- **Acute Health Hazard**
  - No

- **Chronic Health Hazard**
  - No

- **Fire Hazard**
  - No

- **Sudden Release of Pressure Hazard**
  - No

- **Reactive Hazard**
  - No

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**International Regulations**

- **Mexico - Grade**
  - No information available
Sodium Bicarbonate

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class
Non-controlled

16. Other information

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazard 0</th>
<th>Flammability 0</th>
<th>Stability 0</th>
<th>Special precautions -</th>
</tr>
</thead>
</table>

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Revision Date: 2010-09-29
Reason for revision: No information available

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End of Material Safety Data Sheet