SAFETY DATA SHEET

Sodium Bicarbonate

Section 1: Identification

Product Name: Sodium Bicarbonate
Emergency Phone Number: CHEMTREC: 800-424-9300
CAS#: 144-55-8

Other Identification: Baking Soda, Bicarbonate of Soda, Sodium Hydrogen Carbonate

Manufacturer: Natural Soda LLC
3200 County Road 31
Rifle, Colorado 81650  USA
Phone Number: 1-970-878-3674

Intended Use: Food and baking ingredient, specialty products, fire retardant, animal nutrition, pharmaceutical, household and personal care, mild cleaners, general industrial.

Section 2: Hazard(s) Identification

Classification of Substance
Classification (GHS-US): Not Classified
Typical Range: 63 - 75 lbs / ft3

Label Elements
Applicable labeling

GHS-US Labeling:

Unknown Acute Toxicity (GHS-US): Not available

Other Hazards:
Inhalation: Breathing dusts may cause coughing or difficulty breathing
Eye Contact: Direct eye contact may cause irritation, reddening or tearing.
Skin Contact: Direct contact may cause irritation.

Section 3: Composition / Information on Ingredients

Substance Common Name: Sodium Bicarbonate
CAS#: 144-55-8

Chemical Name: Sodium Bicarbonate, Bicarbonate of Soda, Sodium Hydrogen Carbonate

Formula: NaHCO3
Purity 99+% (w/w)
Impurities: No impurities relevant for classification and labeling.

Section 4: First-Aid Measures

Most Important Symptoms and Effects, Acute and Delayed

General: None expected under normal conditions of use.

Eye Contact: Contact may cause irritation due to mechanical abrasion.

Skin: Contact with large amounts of dust may cause mechanical irritation.

Inhalation: Prolonged inhalation of dust may cause respiratory irritation.

Ingestion: Large doses may produce systemic alkalosis and expansion in extracellular fluid volume with edema

Description of First-Aid Measures

General: No known delayed effects. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.

Eye Contact: Immediately rinse eyes with water. Remove any contact lenses, and continue flushing eyes with running water for at least 15 minutes. Get immediate medical attention.

Skin: Wash affected areas with plenty of water, and soap if available, for several minutes. Seek medical attention if irritation develops or persists.

Inhalation: Remove from area to fresh air. Seek medical attention if respiratory irritation develops or if breathing becomes difficult.

Ingestion: May cause nausea, vomiting and abdominal pain. Large doses can cause alkalosis.

Indication of Any Immediate Medical Attention and Special Treatment Needed. If exposed or concerned, get medical advice and attention.
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Section 5: Fire-Fighting Measures

General: This product will not burn, and can be used as a dry powder extinguishing medium.

Extinguishing Media
Suitable Extinguishing Media: Use material suitable for surrounding fire conditions.

Advice for Firefighters: No special precautions required.

Unsuitable Extinguishing Media: None

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Special Hazards Arising from the Substance

Fire Hazard: Not Flammable

Explosion Hazards: Not Explosive

Hazardous Combustion Products: CO2 (displacement of breathable atmosphere).

Reactivity: Hazardous reactions will not occur under normal conditions.

Section 6: Accidental Release Measures

General Personal Precautions, Protective Equipment and Emergency Procedures: For dry spills, sweep or shovel and place in containers for disposal in accordance with applicable regulations (see Disposal Considerations section). Handle in accordance with good industrial hygiene and safety practices. Avoid formation of dust. Avoid excess skin and eye contact. Avoid contamination of bodies of water during cleanup.

For Non-Emergency Personnel: Keep dust levels to a minimum. Wear suitable personal protective equipment.

Environmental Precautions: Avoid any mixture with an acid into sewer or drain (CO2 gas formation).

For Emergency Personnel: Equip cleanup crew with proper protection. Ventilate area.

Methods for Containment: Vacuum or shovel into bags.


Section 7: Handling and Storage

Precautions for Safe Handling: Avoid contact with eyes, skin and clothing. Wash hands thoroughly with soap and water after handling and before eating, drinking or smoking.

Conditions for Safe Storage: Store in a cool, dry and well-ventilated location. Good housekeeping should be maintained to minimize dust accumulation and generation.

Section 8: Exposure Controls / Personal Protection

Control Parameters (Particles not otherwise classified)

US ACGIH (TWA):
- 3 mg/m³ Respirable Dust
- 10 mg/m³ Total Dust

US OSHA PEL (TWA):
- 5 mg/m³ Respirable Dust
- 15 mg/m³ Total Dust

Engineering Controls:
- Use local exhaust ventilation to keep airborne levels below exposure limits.

Eye Protection: Use vented goggles or safety glasses in excessively dusty conditions.

Skin Protection: Not required under normal conditions. Use gloves and protective clothing if excessively dusty, or if skin is damaged.

Respiratory Protection: None required where adequate ventilation is provided. If airborne concentrations are high, use a NIOSH/MSHA approved respirator that has been selected by a technically qualified person for the specific work conditions.
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Section 9: Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White granular solid</td>
</tr>
<tr>
<td>Odor</td>
<td>No odor</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH Value</td>
<td>1% Solution = 8.0-8.5</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Decomposes above 500°C without melting</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not applicable (can be used to put out fires)</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>84.01 g/cc</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Decomposes on heating</td>
</tr>
<tr>
<td>Explosive Limits</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
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<tr>
<td>Bulk Density</td>
<td>60 lbs/ft³</td>
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<tr>
<td>Specific Gravity</td>
<td>(H₂O=1 @ 4°C): 2.16</td>
</tr>
<tr>
<td>Solubility In Water</td>
<td>8.8% at 20°C</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>Not applicable (inorganic substance)</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>&gt;50°C</td>
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<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Section 10: Stability and Reactivity

- **Reactivity:** Hazardous reactions will not occur under normal circumstances.
- **Chemical Stability:** Stable in dry air, in moist air forms sodium carbonate, which is an irritant.
- **Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- **Conditions to Avoid:** Exposure to moisture or moist air. Temperatures above 150°F (65°C)
- **Incompatible Materials:** Acids. Aluminum (tarnishes).
- **Hazardous Decomposition Products:** When heated to decomposition, sodium bicarbonate produces carbon dioxide

Section 11: Toxicological Information

- **Eyes:** Mid (rabbit) 100 mg/30 sec
- **Skin:** Mid (human) 30 mg/3 days-intermittent
- **Ingestion:** Oral LD60 (rat) 4220 mg/kg
  - Oral LD60 (mouse) 3360 mg/kg
  - Oral LD60 (man) 20 mg/kg, 5 days intermittent
  - Oral LD5 (infant) 1260 mg/kg
- **Symptoms after Inhalation:** Prolonged inhalation of dust may cause respiratory irritation.
- **Symptoms after Skin Contact:** Large amounts of dust may cause mechanical irritation.
- **Symptoms after Eye Contact:** Contact may cause irritation due to mechanical abrasion.
- **Symptoms after Ingestion:** Large doses may produce symptomatic alkalosis and expansion in extracellular fluid volume with edema.

**Chronic Symptoms:** None expected under normal conditions of use.

- **Skin Corrosion/Irritation:** Not classified
- **Serious Eye Damage/Irritation:** Not classified
- **Respiratory or skin sensitization:** Not classified
- **Germ cell mutagenicity:** Not classified
- **Teratogenicity:** Not classified
- **Carcinogenicity:** Not classified
- **Specific Target Organ Toxicity:** Not classified
- **Reproductive Toxicity:** Not classified
- **Aspiration Hazard:** Not classified
- **Carcinogenicity:** Sodium Bicarbonate is not listed as a carcinogen by the Environmental Protection Agency (EPA), the State of California, the National Toxicology Program, or the International Agency for Research on Cancer. See Regulatory Information Section for additional information.
Section 12: Ecological Information

Toxicity:
- LC 50 Fish 1: 7100 mg/l (Bluegill)
- LC 50 Fish 1: 8250-9000 mg/l (Exposure time 96h)
- EC 50 Daphnia 1: 4100 mg/l
- EC 50 Daphnia 1: 2350 mg/l (Exposure time 48h)
- LC 50 Fish 2: 7700 mg/l (Rainbow trout)

Persistence and Degradability: Not established
Bio-accumulative Potential: Not established
Mobility in Soil: Not available
Other Adverse Effects: No other adverse effects are identified

Section 13: Disposal Considerations

Disposal Guidance: If permitted by local and state regulations, place in a hazardous or industrial waste landfill. Tonnage quantities are not, however, recommended for the landfill, and if possible, should be re-used for an appropriate application. Small quantities may be flushed to sewers if permitted by NPDES or POTW permit. Refer to federal, state, provincial and local regulations for applicable site-specific requirements. Keep out of drinking water sources. See Regulatory Information for more details.

Section 14: Transport Information

U.S. Department of Transportation (DOT) Identification Number: Sodium Bicarbonate is not a DOT Hazardous Material.


International Transportation: Sodium Bicarbonate has no U.N. number, and is not regulated under international rail, highway, water, or air transport regulations.

Section 15: Regulatory Information

TSCA Number: 144-55-8
TSCA Number: Not listed under any section.
CERCLA (Superfund): Not listed under any section.
Clean Water Act (CWA): Not listed.
Safe Drinking Water Act (SWDA): Not listed.
International Agency for Research on Cancer: Not listed.
NTP Annual Report on Carcinogens:
OSHA Carcinogen: Not listed.
CONEG Model Legislation: Not listed.

California Proposition 65: Not listed.
SARA III: Section 302-No; 311-No; 312-No; 313-No
Workplace Hazardous Materials Information System (WHMIS): Not a controlled product
EU Classification: Not a dangerous substance
OSHA: Treat as particulates not otherwise regulated.
ACGIH: Treat as particulates not otherwise regulated.

Federal Drug Agency (FDA): Sodium bicarbonate is permitted for the following uses: Antibiotic manufacturing; cake, pancake and ready-mixes; catalyst manufacture; chemical; dentifrices; explosives; fire extinguishers; food colors; food conditioner; papermaking; pharmaceuticals; photography; self-rising flour; starches; sugar refining; textiles.

International Listings
- AICS (Australian Inventory of Chemical Substances).
- Canadian DSL (Domestic Substances List).
- IECSC (Inventory of Existing Chemical Substances Produced or Imported in China).
- EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
- Japanese ENCS (Existing & New chemical Substances) inventory
- Korean ECL (Existing Chemicals List)
- NZIoC (New Zealand Inventory of Chemicals)
- PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- United States TSCA (Toxic Substances Control Act) inventory
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Notice

Judgments as to the suitability of information herein for purchaser’s purposes are necessarily purchaser’s responsibility. Therefore, although reasonable care has been taken in the preparation of such information, Natural Soda LLC extends no warranties, makes no representation, and assumes no responsibility as to the accuracy or suitability of such information for application to purchaser’s intended purposes for consequences of its use.

REFERENCES


Registry of Toxic Effects of Chemical Substances Accession Number: VZ0950000.

Section 16: Other Information, Including Date of Preparation or Last Revision

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard

Revision Date: February 1, 2018

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