

## Sodium Bicarbonate

Revision Date: August 1, 2020

Reviewed: August 1, 2020

### Section 1: Identification

<b>Product Name:</b> Sodium Bicarbonate	<b>Emergency Phone Number:</b> CHEMTREC: 800-424-9300
<b>Other Identification:</b> Baking Soda, Bicarbonate of Soda, Sodium Hydrogen Carbonate	<b>CAS#:</b> 144-55-8
<b>Manufacturer:</b> Natural Soda LLC 3200 County Road 31 Rifle, Colorado 81650 USA	<b>Intended Use:</b> Food and baking ingredient, specialty products, fire retardant, animal nutrition, pharmaceutical, household and personal care, mild cleaners, general industrial.
<b>Phone Number:</b> 1-970-878-3674	

### Section 2: Hazard(s) Identification

<b>Classification of Substance</b> <b>Classification (GHS-US):</b> Not Classified	<b>Typical Range:</b> 63 - 75 lbs / ft3
<b>Label Elements</b> <b>GHS-US Labeling:</b> Applicable labeling	<b>Other Hazards:</b> <b>Inhalation:</b> Breathing dusts may cause coughing or difficulty breathing
<b>Unknown Acute Toxicity (GHS-US):</b> Not available	<b>Eye Contact:</b> Direct eye contact may cause irritation, reddening or tearing. <b>Skin Contact:</b> Direct contact may cause irritation.

### Section 3: Composition / Information on Ingredients

<b>Substance Common Name:</b> Sodium Bicarbonate	<b>CAS#:</b> 144-55-8
<b>Chemical Name:</b> Sodium Bicarbonate, Bicarbonate of Soda, Sodium Hydrogen Carbonate	<b>Formula:</b> NaHCO <sub>3</sub> <b>Purity:</b> 99+% (w/w) <b>Impurities:</b> No impurities relevant for classification and labeling.

### Section 4: First-Aid Measures

#### Most Important Symptoms and Effects, Acute and Delayed

<b>General:</b> None expected under normal conditions of use.
<b>Eye Contact:</b> Contact may cause irritation due to mechanical abrasion.
<b>Skin:</b> Contact with large amounts of dust may cause mechanical irritation.
<b>Inhalation:</b> Prolonged inhalation of dust may cause respiratory irritation.
<b>Ingestion:</b> Large doses may produce systemic alkalosis and expansion in extracellular fluid volume with edema

#### Description of First-Aid Measures

<b>General:</b> No known delayed effects. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.
<b>Eye Contact:</b> 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.
<b>Skin:</b> Wash affected areas with plenty of water, and soap if available, for several minutes. Seek medical attention if irritation develops or persists
<b>Inhalation:</b> Remove from area to fresh air. Seek medical attention if respiratory irritation develops or if breathing becomes difficult.
<b>Ingestion:</b> 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.

### Section 5: Fire-Fighting Measures

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

<p><b>Extinguishing Media</b></p> <p><b>Suitable Extinguishing Media:</b> Use material suitable for surrounding fire conditions.</p> <p><b>Unsuitable Extinguishing Media:</b> None</p>	<p><b>Advice for Firefighters:</b> No special precautions required.</p>
<p><b>Special Hazards Arising from the Substance</b></p> <p><b>Fire Hazard:</b> Not Flammable</p> <p><b>Explosion Hazards:</b> Not Explosive</p> <p><b>Reactivity:</b> Hazardous reactions will not occur under normal conditions.</p>	<p><b>General Measures:</b> Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.</p> <p><b>Protection During Firefighting:</b> Do not enter fire area without proper protective equipment, including respiratory protection.</p> <p><b>Hazardous Combustion Products:</b> CO<sub>2</sub> (displacement of breathable atmosphere).</p>

### 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.

<p><b>For Non-Emergency Personnel:</b> Keep dust levels to a minimum</p> <p>Wear suitable personal protective equipment</p> <p><b>For Emergency Personnel:</b> Equip cleanup crew with proper protection.</p> <p>Ventilate area.</p>	<p><b>Environmental Precautions:</b> Avoid any mixture with an acid into sewer or drain (CO<sub>2</sub> gas formation).</p> <p><b>Methods for Containment:</b> Vacuum or shovel into bags.</p> <p><b>Methods for Cleanup:</b> Avoid generation of dust during cleanup of spills. Keep in suitable closed labeled container for disposal.</p>
--	--

### Section 7: Handling and Storage

<p><b>Precautions for Safe Handling:</b> Avoid contact with eyes, skin and clothing. Wash hands thoroughly with soap and water after handling and before eating, drinking or smoking.</p>	<p><b>Conditions for Safe Storage:</b> Store in a cool, dry and well-ventilated location. Good housekeeping should be maintained to minimize dust accumulation and generation.</p>
---	--

### Section 8: : Exposure Controls / Personal Protection

**Control Parameters (Particles not otherwise classified)**

<p><b>US ACGIH (TWA):</b> 3 mg/m<sup>3</sup> Respirable Dust 10 mg/m<sup>3</sup> Total Dust</p> <p><b>US OSHA PEL (TWA):</b> 5 mg/m<sup>3</sup> Respirable Dust 15 mg/m<sup>3</sup> Total Dust</p> <p><b>Engineering Controls:</b> Use local exhaust ventilation to keep airborne levels below exposure limits.</p>	<p><b>Eye Protection:</b> Use vented goggles or safety glasses in excessively dusty conditions.</p> <p><b>Skin Protection:</b> Not required under normal conditions. Use gloves and protective clothing if excessively dusty, or if skin is damaged.</p> <p><b>Respiratory Protection:</b> 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.</p>
---	---

### Section 9: Physical and Chemical Properties

<b>Appearance:</b> White granular solid	<b>Explosive Limits:</b> Not applicable
<b>Odor:</b> No odor	<b>Vapor Pressure:</b> Not applicable
<b>Odor Threshold:</b> Not applicable	<b>Vapor Density:</b> Not applicable
<b>pH Value:</b> 1% Solution = 8.0-8.5	<b>Bulk Density:</b> 60 lbs/ ft <sup>3</sup>
<b>Melting Point:</b> Decomposes above 500C without melting	<b>Specific Gravity:</b> (H <sub>2</sub> O=1 @ 4°C): 2.16
<b>Boiling Point:</b> Not applicable	<b>Solubility In Water:</b> 8.8% at 20°C
<b>Flash Point:</b> Not applicable	<b>Partition coefficient:</b> Not applicable (inorganic substance)
<b>Evaporation Rate:</b> Not applicable	<b>Auto-ignition temperature:</b> Not applicable
<b>Flammability:</b> Not applicable (can be used to put out fires)	<b>Decomposition temperature:</b> >50°C
<b>Molecular Weight:</b> 84.01 g/cc	<b>Viscosity:</b> Not applicable
<b>Boiling Point:</b> Decomposes on heating	

### Section 10: Stability and Reactivity

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

### Section 11: Toxicological Information

<b>Eyes:</b> Mid (rabbit) 100 mg/ 30 sec	<b>Symptoms after Inhalation:</b> Prolonged inhalation of dust may cause respiratory irritation.
<b>Skin:</b> Mid (human) 30 mg/ 3 days-intermittent	<b>Symptoms after Skin Contact:</b> Large amounts of dust may cause mechanical irritation.
<b>Ingestion:</b> Oral LD50 (rat) 4220 mg/kg	<b>Symptoms after Eye Contact:</b> Contact may cause irritation due to mechanical abrasion.
	<b>Symptoms after Ingestion:</b> Large doses may produce symptomatic alkalosis and expansion in extracellular fluid volume with edema.
	<b>Chronic Symptoms:</b> None expected under normal conditions of use

<b>Skin Corrosion/Irritation:</b> Not classified
<b>Serious Eye Damage/Irritation:</b> Not classified
<b>Respiratory or skin sensitization:</b> Not classified
<b>Germ cell mutagenicity:</b> Not classified
<b>Teratogenicity:</b> Not classified
<b>Carcinogenicity:</b> Not classified
<b>Specific Target Organ Toxicity:</b> Not classified
<b>Reproductive Toxicity:</b> Not classified
<b>Aspiration Hazard:</b> Not classified

<b>Carcinogenicity:</b> 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

<b>Toxicity:</b>	<b>Persistence and Degradability:</b> Not established
<b>LC 50 Fish 1:</b> 7100 mg/l (Bluegill)	<b>Bio-accumulative Potential:</b> Not established
<b>LC 50 Fish 1:</b> 8250-9000 mg/l (Exposure time 96h)	<b>Mobility in Soil:</b> Not available
<b>EC 50 Daphnia 1:</b> 4100 mg/l	<b>Other Adverse Effects:</b> No other adverse effects are identified
<b>EC 50 Daphnia 1:</b> 2350 mg/l (Exposure time 48h)	
<b>LC 50 Fish 2:</b> 7700 mg/l (Rainbow trout)	

### 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

<b>U.S. Department of Transportation (DOT) Identification Number:</b> Sodium Bicarbonate is not a DOT Hazardous Material.	<b>International Transportation:</b> Sodium Bicarbonate has no U.N. number, and is not regulated under international rail, highway, water, or air transport regulations.
<b>Transportation of Dangerous Goods (TDG):</b> Not Regulated.	

### Section 15: Regulatory Information

<b>TSCA Number:</b> 144-55-8	<b>California Proposition 65:</b> Not listed.
<b>TSCA Number:</b> Not listed under any section.	<b>SARA III:</b> Section 302-No; 311-No; 312-No; 313-No
<b>CERCLA (Superfund):</b> Not listed under any section.	<b>Workplace Hazardous Materials Information System (WHMIS):</b> Not a controlled product
<b>Clean Water Act (CWA):</b> Not listed.	<b>EU Classification:</b> Not a dangerous substance
<b>Safe Drinking Water Act (SWDA):</b> Not listed.	<b>OSHA:</b> Treat as particulates not otherwise regulated.
<b>International Agency for Research on Cancer:</b> Not listed.	<b>ACGIH:</b> Treat as particulates not otherwise regulated.
<b>NTP Annual Report on Carcinogens:</b>	<b>Federal Drug Agency (FDA):</b> 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.
<b>OSHA Carcinogen:</b> Not listed.	
<b>CONEG Model Legislation:</b> Not listed.	

#### 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

**Sodium Bicarbonate**

Revision Date: August 1, 2020

Reviewed: August 1, 2020

**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**

American Conference of Governmental Industrial Hygienists (ACGIH). 1986. *Documentation of threshold limit values and biological exposure indices*. 5th ed. Cincinnati, OH. American Conference of Governmental Industrial Hygienists (ACGIH). 1990. *1990-1991 Threshold limit values for chemical substances and physical agents and biological exposure indices*. Cincinnati, OH.

Budavari, S., M. J. O'Neil, A. Smith, and P. E. Heckelman, eds. 1989. *The Merck Index*. 11th ed. Rahway, NJ: Merck & Co., Inc.

Clayton, G. D., and F. E. Clayton, eds. 1981. *Patty's Industrial Hygiene and Toxicology*. 3rd ed. New York: Wiley & Sons.

Department of Transportation (DOT). 1990. 49 S172.102. October 1.

Department of Transportation (DOT). 1991. 46 S150.105. August 23.

International Agency for Research on Cancer (IARC). 1987. *IARC monographs on the evaluation of the carcinogenic risk of chemicals to humans. Supplement 7, Overall evaluation of carcinogenicity: An updating of IARC monographs 1 to 42*. Lyon, France: World Health Organization.

National Library of Medicine (NLM). 1991a. *Hazardous substances databank*. Bethesda, MD.

National Library of Medicine (NLM). National Institute for Occupational Safety and Health (NIOSH). Department of Health and Human Services. 1991b. *Registry of toxic effects of chemical substances (RTECS)*.

National Toxicology Program (NTP). Division of Toxicology Research and Testing. 1991. *Chemical Status report*. Research Triangle Park, NC. July.

Occupational Safety and Health Administration (OSHA). 1990. 29 S1910.1000. July 1.

Sax, N. I., and R. J. Lewis, Sr., eds. 1989. *Dangerous properties of Industrial Materials*. 7th ed. New York: Van Nostrand Reinhold.

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:** August 1, 2020

**Prepared by:** Natural Soda LLC  
3200 County Road 31  
Rifle, Colorado 81650  
Ph: 970-878-3674