NATURAL SODA

SODIUM BICARBONATE

Safety Data Sheet

Section 1: Identification

Product Name: SODIUM BICARBONATE	**Emergency Phone Number:** CHEMTREC: 800-424-9300
Other Identification: Baking Soda, Bicarbonate of Soda, Sodium Hydrogen Carbonate	**CAS#:** 144-55-8
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 **Label Elements** **GHS-US Labeling:** No applicable 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	**CAS#:** 144-55-8
Common Name: Sodium Bicarbonate	**Formula:** $NaHCO_3$
Chemical Names: Sodium Bicarbonate, Bicarbonate of Soda, Sodium Hydrogen Carbonate	**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	**Description of First-Aid Measures**
General: None expected under normal conditions of use.	**General:** No known delayed effects. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.
Eye Contact: Contact may cause irritation due to mechanical abrasion.	**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: Contact with large amounts of dust may cause mechanical irritation.	**Skin:** Wash affected areas with plenty of water, and soap if available, for several minutes. Seek medical attention if irritation develops or persists.
Inhalation: Prolonged inhalation of dust may cause respiratori irritation.	**Inhalation:** Remove from area to fresh air. Seek medical attention if respiratory irritation develops or if breathing becomes difficult.
Ingestion: Large doses may product systemic alkalosis and expansion in extracellular fluid volume with edema.	**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.	

Section 5: Fire-fighting Measures

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

Extinguishing Media **Suitable Extinguishing Media:** Use material suitable for surrounding fire conditions. **Unsuitable Extinguishing Media:** none. **Special Hazards Arising from the Substance** **Fire Hazard:** Not Flammable **Explosion Hazards:** Not Explosive **Reactivity:** Hazardous reactions will not occur under normal conditions.	**Advice for Firefighters** No special precautions required. **General Measures:** Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. **Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection. **Hazardous Combustion Products:** CO_2 (displacement of breathable atmosphere).

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 practice. 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 (CO_2 gas formation)
For Emergency Personnel Equip cleanup crew with proper protection. Ventilate area..	**Methods for Containment:** vacuum or shovel into bags **Methods for Cleanup:** Avoid generation of dust during cleanup of spills. Keep in suitable closed labeled container for disposal.

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Section 7: Handling and Storage

Precautions for Safe Handling	Conditions for Safe Storage
General: Avoid contact with eyes, skin and clothing. Wash hands thoroughly with soap and water after handling and before eating, drinking or smoking.	**General:** Store in a cool, dry and well-ventilated location. Good housekeeping should be maintained to minimize dust accumulation and generation. **Incompatibilities**: Keep away from acids, water.

Section 8: Exposure Controls / Personal Protection

Control Parameters (Particles not otherwise classified)

US ACGIH (TWA) :	3 mg/m^3 Respirable Dust 10 mg/m^3 Total Dust
US OSHA PEL (TWA):	5 mg/m^3 Respirable Dust 15 mg/m^3 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.

Section 9: Physical and Chemical Properties

Solubility In Water: 8.8% at 20°C	**pH Value:** 1% Solution = 8.0-8.5
Appearance: White granular solid	**Flash Point:** Not Applicable
Molecular Weight: 84.01	**Specific Gravity:** (H_2O=1 @ 4°C): 2.16
Boiling Point: Decomposes on heating	**Bulk Density:** 60 lbs/ ft^3
Melting Point: Decomposes above 50^{0}C without melting	**Vapor Pressure:** Not Applicable

Section 10: Stability and Reactivity

Reactivity: Hazardous reactions will not occur under normal circumstances.	**Conditions to Avoid:** Exposure to moisture or moist air. Temperatures above 150^{o}F (65^{o}C)
Chemical Stability: Stable in dry air, in moist air forms sodium carbonate, an irritant.	**Incompatible Materials:** Acids. Aluminum (tarnishes).
Possibility of Hazardous Reactions: Hazardous polymerization will not occur.	**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 LDL5 (man) 20 mg/kg/ 5 days-intermittent
Oral LDL5 (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)	**Persistence and Degradability:** Not established
LC 50 Fish 1:	8250-9000 mg/l (Exposure time 96h)	**Bioaccumulative Potential:** Not established
EC 50 Daphnia 1:	4100 mg/l	**Mobility in Soil:** Not available
EC 50 Daphnia 1:	2350 mg/l (Exposure time 48h)	**Other Adverse Effects:** No other adverse effects are identified
LC 50 Fish 2:	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.

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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.

Transportation of Dangerous Goods (TDG): Not Regulated.

Section 15: Regulatory Information

TSCA Number: 144-55-8	**California Proposition 65:** Not listed.
RCRA (40 CFR 261): Not listed under any section.	**SARA III: Section 302-No:311-Yes: 312-Yes: 313-No**
CERCLA (Superfund): Not listed under any section.	**Workplace Hazardous Materials Information System (WHMIS):** Not a controlled product.
Clean Water Act (CWA): Not listed.	**EU CLASSIFICATION:** Not a dangerous substance.
Safe Drinking Water Act (SWDA): Not listed.	**OSHA:** Treat as particulates not otherwise regulated.
International Agency for Research on Cancer: Not listed.	**ACGIH:** Treat as particulates not otherwise regulated.
NTP Annual Report on Carcinogens: **OSHA Carcinogen:** Not listed. **CONEG Model Legislation:** Not listed.	**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

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*. 5thed. 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*. 11thed. Rahway, NJ: Merck & Co., Inc.

Clayton, G. D., and F. E. Clayton, eds. 1981. *Patty's Industrial Hygiene and Toxicology.* 3rded. 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.* 7thed. 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 29 CFR 1910.1200.

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