



# Safety Data Sheet

## Section 01 - Identification

<b>Product Identifier</b>	Sodium Bicarbonate
<b>Other Means of Identification</b>	Baking soda, bicarbonate of soda.
<b>Product Use and Restrictions on Use</b>	Leavening agent, cleaner ingredient, bath salt ingredient, water softener, diaper rinse ingredient, feed additive, fire extinguishers, sponge rubber and plastics.
<b>Initial Supplier Identifier</b>	ClearTech Industries Inc. 1500 Quebec Avenue Saskatoon, SK. Canada S7K 1V7
<b>Prepared By</b>	ClearTech Industries Inc. Technical Writer Phone: 1 (800) 387-7503
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## Section 02 - Hazard Identification

### GHS-Classification

This product has been assessed in accordance with the Hazardous Products Regulations and is not classified as a hazardous substance or mixture.

## Section 03 - Composition / Information on Ingredients

Chemical Name	CAS Number	Weight %	Unique Identifiers
Sodium Bicarbonate	144-55-8	>99%	

## Section 04 - First Aid Measures

<b>Inhalation</b>	If symptoms are experienced, remove source of contamination or move victim to fresh air. Obtain medical advice.
<b>Skin Contact / Absorption</b>	Remove contaminated clothing. Wash affected area with soap and water. Seek medical attention if irritation occurs or persists. Wash clothing, shoes and leather goods before reuse.
<b>Eye Contact</b>	DO NOT allow victim to rub eye(s). Let the eye(s) water naturally for a few minutes. Have victim look right and left, and then up and down. If particle/dust does not dislodge, flush with lukewarm, gently flowing water for 30 minutes or until particle/dust is removed, while holding the eyelid(s) open. If irritation persists, immediately obtain medical attention. DO NOT attempt to manually remove anything stuck to the eye(s).
<b>Ingestion</b>	If irritation or discomfort occurs, obtain medical advice.
<b>Additional Information</b>	<b>Note to physician:</b> Treat symptomatically, large doses, particularly in patients with renal insufficiency, may produce systematic alkalosis and/or expansion in the extra-cellular fluid volume with edema.

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## Section 05 - Fire Fighting Measures

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**Suitable Extinguishing Media** Sodium bicarbonate does not burn and does not support combustion. Use extinguishing media suitable for surrounding fire. Sodium bicarbonate is used as a dry powder extinguishing agent suitable for all classes of fires.

**Unsuitable Extinguishing Media** Not Available

**Specific Hazards Arising From the Chemical** Corrosive fumes of sodium oxide, carbon monoxide and carbon dioxide are formed in a fire. Sodium bicarbonate starts decomposing when heated over 50°C, releasing carbon dioxide, sodium carbonate and water, with total decomposition at 270°C. If extremely large quantities are involved in a fire, significant levels of carbon dioxide may be generated by heat. Closed containers may rupture violently when heated.

**Special Protective Equipment and Precautions for Fire-Fighters** Wear NIOSH-approved self-contained breathing apparatus and protective clothing.

**Further Information** Not Available

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## Section 06 - Accidental Release Measures

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**Personal Precautions / Protective Equipment / Emergency Procedures** Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so. Prevent material from entering sewers.

**Environmental Precautions** Avoid contamination of bodies of water during cleanup.

**Methods and Materials for Containment and Cleaning Up** Dry sweeping is not recommended. Pre-dampening the material or use of a vacuum is preferred. Shovel into clean, dry, labelled containers and cover. Flush area with water.

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## Section 07 - Handling and Storage

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**Precautions for Safe Handling** Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure.

**Conditions for Safe Storage** Store in suitable, labelled containers, preferably the supplier container. Protect contents from accidental contact with water. Protect from damage. Practice keeping storage containers closed when not in use and when empty.

**Incompatibilities** Acids, monoammonium phosphate, sodium-potassium alloy, 2-furaldehyde.

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## Section 08 - Exposure Controls and Personal Protection

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### Exposure Limit(s)

Component	Regulation	Type of Listing	Value
Sodium Bicarbonate	Not Established		

### Engineering Control(s)

**Ventilation Requirements** Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions must be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems.

**Other** Emergency shower and eyewash must be available and tested in accordance with regulations and be in close proximity.

## **Protective Equipment**

<b>Eyes/Face</b>	No specific requirement, but it is good practice to wear chemical safety goggles.
<b>Hand Protection</b>	No specific requirement, but it is good practice to prevent skin contact.
<b>Skin and Body Protection</b>	Dry product is generally non-irritating to intact skin. However, this product can be irritating where skin has been damaged and can create skin irritation after long exposures when moisture is present. Under such conditions, long-sleeved clothing is recommended to minimize skin contact.  No special footwear is required other than what is mandated at place of work.
<b>Respiratory Protection</b>	No specific guidelines are available. An approved respirator suitable for non-toxic dust may be adequate.
<b>Thermal Hazards</b>	Not Available

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## **Section 09 - Physical and Chemical Properties**

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### **Appearance**

<b>Physical State</b>	Solid
<b>Colour</b>	White granular
<b>Odour</b>	Odourless
<b>Odour Threshold</b>	Not Applicable

### **Property**

<b>pH</b>	8.3-8.4. The alkalinity increases as solution stands, is agitated or heated.
<b>Melting Point/Freezing Point</b>	Decomposes
<b>Initial Boiling Point and Boiling Range</b>	Decomposes
<b>Flash Point</b>	Not Applicable
<b>Evaporation Rate</b>	Not Applicable
<b>Flammability</b>	Non-Flammable
<b>Upper Flammable Limit</b>	Not Applicable
<b>Lower Flammable Limit</b>	Not Applicable
<b>Vapour Pressure (mm Hg, 20°C)</b>	Not Applicable
<b>Vapour Density (Air=1)</b>	Not Applicable
<b>Relative Density</b>	Not Available
<b>Solubility(ies)</b>	Moderately soluble in water. Insoluble in ethanol
<b>Partition Coefficient: n-octanol/water</b>	Not Applicable

<b>Auto-ignition Temperature</b>	Not Applicable
<b>Decomposition Temperature</b>	Begins to decompose at 50°C with complete decomposition at 270°C
<b>Viscosity</b>	Not Applicable
<b>Explosive Properties</b>	Not Applicable
<b>Specific Gravity (Water=1)</b>	2.16 @ 20°C
<b>% Volatiles by Volume</b>	Not Available
<b>Formula</b>	NaHCO <sub>3</sub>
<b>Molecular Weight</b>	84.01

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## Section 10 - Stability and Reactivity

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<b>Reactivity</b>	Readily decomposed by weak acids (e.g. acetic acid). In aqueous solution, it begins to break up into carbon dioxide and sodium carbonate at about 20°C and completely on boiling.
<b>Stability</b>	Normally stable in dry air at room temperature. In moist air, it slowly decomposes and loses carbon dioxide.
<b>Possibility of Hazardous Reactions</b>	None known.
<b>Conditions to Avoid</b>	Heat
<b>Incompatible Materials</b>	Acids, monoammonium phosphate, sodium-potassium alloy, 2-furaldehyde.
<b>Hazardous Decomposition Products</b>	Corrosive fumes of sodium oxide, carbon monoxide and carbon dioxide are formed in a fire. Sodium bicarbonate starts decomposing when heated over 50°C, releasing carbon dioxide, sodium carbonate and water.

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## Section 11 - Toxicological Information

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### Acute Toxicity

Component	Oral LD <sub>50</sub>	Dermal LD <sub>50</sub>	Inhalation LC <sub>50</sub>
Sodium Bicarbonate	4220mg/kg (rat)	Not Available	> 4.74mg/L (rat, 4.5hr)

### Chronic Toxicity – Carcinogenicity

Component	IARC
Sodium Bicarbonate	Not known to be carcinogenic.

<b>Skin Corrosion/Irritation</b>	Non-irritant to very mild skin irritant.
<b>Ingestion</b>	May cause nausea, vomiting and abdominal pain. Large doses can cause alkalosis.
<b>Inhalation</b>	May cause coughing or difficulty in breathing. Adverse symptoms may include: respiratory tract irritation, coughing.
<b>Serious Eye Damage/Irritation</b>	Very mild eye irritant.
<b>Respiratory or Skin Sensitization</b>	Skin irritation may be aggravated in persons with skin lesions.
<b>Germ Cell Mutagenicity</b>	Not known to be a mutagen.

<b>Reproductive Toxicity</b>	Sodium bicarbonate is not known to cause reproductive or developmental toxicity. No adverse effects in the offspring were seen in a study where rats, rabbits and mice were exposed orally during pregnancy.
<b>STOT-Single Exposure</b>	Acute oral ingestion by patients may result in a ruptured stomach due to excessive gas development.
<b>STOT-Repeated Exposure</b>	Long-term ingestion of high doses can also cause high blood pressure.
<b>Aspiration Hazard</b>	Breathing of dust may aggravate acute or chronic asthma and other chronic pulmonary disease.
<b>Synergistic Materials</b>	Not Available

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## Section 12 – Ecological Information

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### Ecotoxicity

Component	Toxicity to Algae	Toxicity to Fish	Toxicity to Daphnia and Other Aquatic Invertebrates
Sodium bicarbonate	EC <sub>50</sub> (Diatom, 96hr): 650mg/L	LC <sub>50</sub> (Rainbow trout, 96hr): 7700mg/L LC <sub>50</sub> (Bluegill, 96hr): 7100mg/L	EC <sub>50</sub> (Ceriodaphnia dubia, 48hr): 1020mg/L
<b>Biodegradability</b>	Not Available		
<b>Bioaccumulation</b>	Sodium bicarbonate is present in the environment as sodium and bicarbonate ions, which implies that it will not adsorb on particulate matter or surfaces and will not accumulate in living tissues.		
<b>Mobility</b>	High mobility.		
<b>Other Adverse Effects</b>	Not Available		

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## Section 13 – Disposal Considerations

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<b>Waste From Residues/Unused Products</b>	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.
<b>Contaminated Packaging</b>	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

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## Section 14 – Transport Information

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<b>UN Number</b>	Not Regulated
<b>UN Proper Shipping Name</b>	Not Regulated
<b>Transport Hazard Class(es)</b>	Not Regulated
<b>Packaging Group</b>	Not Regulated
<b>Environmental Hazards</b>	Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.
<b>Special Precautions</b>	Not Available
<b>Transport in Bulk</b>	Not Available
<b><u>TDG</u></b>	
<b>Other</b>	Secure containers (full and/or empty) with suitable hold down devices during shipment and ensure all caps, valves, or closures are secured in the closed position.

**TDG PRODUCT CLASSIFICATION:** This product has been classified on the preparation date specified at section 14 of this MSDS / SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and/or published test data regarding the classification of this product are listed in the references at section 16 of this MSDS / SDS.

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## Section 15 – Regulatory Information

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**NOTE: THE PRODUCT LISTED ON THIS SDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS SDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.**

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## Section 16 – Other Information

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**Preparation Date** August 31, 2015

**Note:** The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

### **Attention: Receiver of the chemical goods / SDS coordinator**

As part of our commitment to the Canadian Association of Chemical Distributors (CACD) Responsible Distribution<sup>®</sup> initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that you forward the attached Safety Data Sheet(s) to all affected employees, customers, and end-users. ClearTech will send any available supplementary handling, health, and safety information to you at your request.

If you have any questions or concerns please call our customer service center.

### **References:**

- 1) CHEMINFO
- 2) eChemPortal
- 3) TOXNET
- 4) Transportation of Dangerous Goods Canada
- 5) HSDB
- 6) ECHA
- 7) PAN

### **ClearTech Industries Inc. - Locations**

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