SAFETY DATA SHEETS (SDS)

1. PRODUCT IDENTIFICATION

PRODUCT NAME: **SODIUM BICARBONATE**

SYNONYMS: Baking Soda

FORMULA: $NaHCO_3$

RECOMMENDED USES: Food Ingredient, Pharmaceutical, Household and Personal Care Product, Water Treatment, General Industrial Use.

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2. HAZARD IDENTIFICATION

- The consumer variant of this product is labeled in accordance with regulations administered by the Consumer Product Safety Commission (CPSC) and the food and Drug Administration (FDA).
- The use pattern and exposure in the workplace are generally not consistent with those experienced by the consumers.
- The requirements of the Occupational Safety and Health Administration applicable to this SDS differ from the labeling requirements of the CPSC and FDA, as a result, this SDS may contain additional health hazard information not pertinent to consumer use and not found on the product label.

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:

Classification (GHS-US) Not classified

LABEL ELEMENTS:

- GHS-US Labeling- No labeling applicable

OTHER HAZARDS:

- Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.
- Prolonged contact with dust can produce mechanical irritation.

UNKNOWN ACUTE TOXICITY (GHS-US): Not available

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances

Name Sodium Bicarbonate
CAS No 144-55-8

Name	Product Identifier	% (w/w)	Classification (GHS-US)
Sodium Bicarbonate	(CAS No) 144-55-8	100	Not Classified

4. FIRST-AID MEASURES

Description of First Aid Measures

GENERAL: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice.
EYES: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Obtain medical attention if irritation persists.

SKIN: Brush off loose particles from skin. Rinse immediately with plenty of water. Obtain medical attention if irritation develops or persists.

INHALATION: When symptoms occur: go into open air and ventilate suspected area.
INGESTION: Rinse mouth. Do NOT induce vomiting. Seek medical attention if a large amount is swallowed.
Most Important Symptoms and Effects Both Acute and Delayed General: None expected under normal conditions of use.
Inhalation: Prolonged inhalation of dust may cause respiratory irritation.
Skin Contact: Skin contact with large amounts of dust may cause mechanical irritation.
Eye Contact: Contact may cause irritation due to mechanical abrasion.
Ingestion: Large doses may produce systemic alkalosis and expansion in extracellular fluid volume with edema.
Chronic Symptoms: None expected under normal conditions of use.

5. FIRE FIGHTING MEASURES

EXTIGUISHING MEDIA
SUITABLE EXTINGUISHING MEDIA: Use extinguishing media appropriate for surrounding fire.
UNSUITABLE EXTINGUISHING MEDIA: For surrounding fire: Use of heavy of water may spread fire.
Special hazards Arising From the Substance or Mixture
FIRE HAZARD: NOT FLAMMABLE. Under fire conditions, hazardous fumes will be present.
EXPLOSION HAZARD: Product is not explosive.
REACTIVITY: Hazardous reactions will not occur under normal conditions.
FIRE FIGHTING INSTRUCTIONS:

- Wear self-contained breathing apparatus when entering area unless atmosphere is provided to be safe.
- Exercise caution when fighting any chemical fire.

PROTECTIONS DURING FIREFIGHTING: Do not enter area without proper protective equipment, including respiratory protection.
HAZARDOUS COMBUSTION PRODUCTS: Carbon oxides (CO, CO_2). Sodium oxides.
REFERENCE TO OTHER SECTIONS: Refer to section 9 flammability properties.

6. ACCIDENTAL RELEASE MEASURES

GENERAL MEASURES: Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust or fumes. Avoid skin and eye contact.
FOR EMERGENCY PERSONNEL
PROTECTIVE EQUIPMENT: Equip cleanup crew with proper protection
EMERGENCY PROCEDURES: Ventilate area.
ENVIRONMENTAL PRECAUTIONS: Prevent entry to sewers and public waters. Avoid release to the environment.
METHODS AND MATERIAL FOR CONTAINMENT AND CLEAN UP: For containment contain and collect as any solid. Methods for cleaning up- clean up spills immediately and dispose of waste safely. Avoid generation of dust during clean-up of spills. Keep in suitable, closed containers for disposal. Contact competent authorities after aspill.
REFERENCE TO OTHER SECTIONS: See heading 8, Exposure and Personal Protection.

7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING
Additional Hazards When Processed: When heated, Material emits irritating fumes.
Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.
CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES
Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use.
Incompatible Materials: Acids. Water. Lime.

Storage Temperature: < 65 °C (150 °F)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

Particulates not otherwise classified (PNOC)		
USA ACGIH	ACGIH TWA (mg/m³)	3 mg/m3 Respirable fraction 10 mg/m3 Total Dust
USA OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m3 Respirable fraction 15 mg/m3 Total Dust
Alberta	OEL TWA (mg/m³)	10 mg/m³ (total)
British Columbia	OEL TWA (mg/m³)	10 mg/m³ (total dust)
Manitoba	OEL TWA (mg/m³)	10 mg/m³ (inhalable particles, recommended)
New Brunswick	OEL TWA (mg/m³)	3 mg/m³ (particulate matter containing no Asbestos and <1% Crystalline silica, respirable fraction)
Newfoundland & Labrador	OEL TWA (mg/m³)	10 mg/m³ (inhalable particles, recommended)
Nova Scotia	OEL TWA (mg/m³)	10 mg/m³ (inhalable particles, recommended)
Nunavut	OEL TWA (mg/m³)	5 mg/m³ (respirable mass)
Northwest Territories	OEL TWA (mg/m³)	5 mg/m³ (respirable mass)
Ontario	OEL TWA (mg/m³)	10 mg/m³ (inhalable)
Prince Edward Island	OEL TWA (mg/m³)	10 mg/m³ (inhalable particles, recommended)
Québec	VEMP (mg/m³)	10 mg/m³ (including dust, inert or nuisance particulates; containing no Asbestos and <1% Crystalline silica-total dust)
Saskatchewan	OEL STEL (mg/m³)	20 mg/m³ (insoluble or poorly soluble-inhalable fraction) 6 mg/m³ (insoluble or poorly soluble-respirable fraction)
Saskatchewan	OEL TWA (mg/m³)	10 mg/m³ (insoluble or poorly soluble-inhalable fraction) 3 mg/m³ (insoluble or poorly soluble-respirable fraction)

Appropriate Engineering Controls: For occupational/workplace settings: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.
PERSONAL PROTECTIVE EQUIPMENT: For occupational or bulk quantities: Globes. Safety glasses. Dust formation: dust mask.

RESPIRATORY PROTECTION: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.
EYE PROTECTION: For occupational or bulk quantities: Chemical goggles or safety glasses.
HAND PROTECTION: For occupational or bulk quantities: wear chemically resistant protective gloves.
OTHER INFORMATION: When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	Solid
Appearance/Odor	White, crystalline powder/odorless
Odor Threshold	Not Available
pH	8.2 (1%Solution)
Evaporation Rate	Not available

Melting Point	Not available
Freezing point	Not available
Boiling Point	Not available
Flash Point	Not available
Flammability (solid,gas)	Not available
Specific gravity/density	62 lb/ft³
Solubility	Water: 8.6 g/100ml @ 12 °C (68 °F)
Explosion Data-Sensitivity to Mechanical Impact	Not expected to present an explosion due to mechanical impact.
Explosion Data-Sensitivity to Static Discharge	Not Expected to present an explosion due to static discharge.

10. STABILITY AND REACTIVITY

REACTIVITY: Stable under normal ambient conditions of temperature and pressure.
CHEMICAL STABILITY: Decomposes slowly on exposure to water (moisture).
POSIBLE 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. Water. Lime.
HAZARDOUS DECOMPOSITION PRODUCTS: None known. At high temperature may liberate toxic gases.

11. TOXICOLOGICAL INFORMATION

EYE:	Particulate matter may cause physical injury to the eye.
SKIN:	May cause minor irritation.
INHALATION:	May cause respiratory irritation through single use. May cause damage to lungs or pulmonary disease through prolonged/repeated exposure to dust.
INGESTION:	Ingestion of large quantities may result in gastrointestinal irritation and eventually interference with phosphate absorption which results in rickets.

12. ECOLOGICAL INFORMATION

Toxicity No additional information available

Sodium Bicarbonate	
LC50 Fish 1	7100 mg/l Bluegill
EC50 Daphnia 1	4100 mg/1
LC 50 FISH 2	7700 mg/1 Rainbow trout
Sodium bicarbonate (144-55-8)	
LC50 Fish 1	8250 – 9000 mg/1 (Exposure time: 96h – Species: Lepomis macrochirus [static])
EC50 Daphnia 1	2350 mg/1 (exposure time:48 h – Species: Daphnia magna)

Persistence & Degradability: Not Established
Bioaccumulative Potential: Not established
Mobility In Soil: Not available
Other Information: Avoid release to the environment.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

14. TRANSPORT INFORMATION

In Accordance with DOT Not regulated for transport

In Accordance with IMDG	Not regulated for transport
In Accordance with IATA	Not regulated for transport
In Accordance with TDG	Not regulated for transport

15. REGULATORY INFORMATION

US Federal & International Regulations

Sodium Bicarbonate (144-55-8)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations: Neither this product not its chemicals components appear on any US state lists.

Canadian Regulations

Sodium Bicarbonate (144-55-8)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

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

16. OTHER INFORMATION & LAST REVISION DATE

- This document has been prepared in accordance with the SDS requirements of the OSHA Hazard communication Standard 29 CFR 1910.1200.

DISCLAIMER:

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LAST REVISION DATE: 10/21/15