MATERIAL SAFETY DATA SHEET

Sodium Bisulphate

Section 01 - Chemical And Product And Company Information

Product Identifier ………………… Sodium Bisulphate

Product Use ………………………… Industrial pH adjuster, activating acid in formulated dry-acid cleaners, and metal cleaning compounds, disinfectant

Supplier Name…………………….. ClearTech Industries Inc.
1500 Quebec Avenue
Saskatoon, SK. Canada
S7K 1V7

Prepared By……………………….. ClearTech Industries Inc. Technical Department
Phone: 1 (800) 387-7503

24-Hour Emergency Phone……….. 1 (800) 387-7503

Section 02 - Composition / Information on Ingredients

Hazardous Ingredients……………… Sodium Bisulphate >90%

CAS Number……………………….. Sodium Bisulphate 7681-38-1

Synonym (s)………………………… Sodium acid sulphate, GBS, globular sodium bisulphate, nitre cake, sodium hydrogen sulfate, sodium acid sulfate, and monosodium salt.
Section 03 - Hazard Identification

**Inhalation**
Dust or mist inhalation may irritate nose, throat, and lungs and may cause respiratory tract irritation and lung edema.

**Skin Contact / Absorption**
Prolonged contact may result in skin irritation such as redness, pain, and severe burns.

**Eye Contact**
Can cause mild to severe irritation due to being an acidic irritant. May cause abrasive damage due to crystalline dust. May cause burns if eyes are not flushed with water.

**Ingestion**
Small amount are not likely to cause injury, however, large amounts ingested can cause severe burns of mouth, throat, and stomach. Also may cause sore throat, vomiting, and diarrhea.

**Exposure Limits**
No established limits. Treat as nuisance particulates. ACGIH-TLV: 10mg/m³ (total respirable dust)

Section 04 - First Aid Measures

**Inhalation**
Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek medical attention if difficulties persist.

**Skin Contact / Absorption**
Remove contaminated clothing. Wash affected area with water for at least 15 minutes. Wash clothing before reuse. Seek medical attention if irritation occurs or persists.

**Eye Contact**
Flush immediately with water for at least 20 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. Seek immediate medical attention if irritation persists.

**Ingestion**
Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

**Additional Information**
Not Available

Section 05 - Fire Fighting

**Conditions of Flammability**
Not a specific fire or explosive hazard.

**Means of Extinction**
Product does not burn. Use appropriate extinguishing media for material that is supplying the fuel to the fire. Avoid contacting material with water as it readily dissolves in water to form a weak acid solution.
Flash Point........................................Not Applicable

Auto-ignition Temperature.................. Not Applicable

Upper Flammable Limit ..................... Not Applicable

Lower Flammable Limit........................ Not Applicable

Hazardous Combustible Products.... When heated to decomposition at 430°C, oxides of sulphur are formed.

Special Fire Fighting Procedures..... Wear NIOSH-approved self-contained breathing apparatus and protective clothing. If water has to be used, wear acid protective equipment. A self-contained breathing apparatus should be worn if temperatures > 430°C.

Explosion Hazards......................... None

### Section 06 - Accidental Release Measures

Leak / Spill........................................ Wear appropriate personal protective equipment as suggested in Section 8. Vacuum or shovel spilled material and place into disposal container. Dilute residual material with water and discharge as per local, provincial and/or federal regulations permit.

Deactivating Materials.................... Not Available

### Section 07 - Handling and Storage

Handling Procedures........................ Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid breathing in dust.

Storage Requirements........................ Store in a cool, dry, well-ventilated place. Keep container tightly closed, and away from incompatible materials. Material is hygroscopic, do not store material where moisture is present. Storage near strong alkalis must be avoided.

### Section 08 - Personal Protection and Exposure Controls

Protective Equipment

Eyes............................................... Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.
Respiratory ................................................. For dusty areas > 10mg/m³, NIOSH-approved respirator for dust respirator should be worn.

Gloves ..................................................... Impervious gloves of chemically resistant material (rubber) should be worn. Wash contaminated clothing and dry thoroughly before reuse.

Clothing .................................................. Body suits, aprons, and/or coveralls of chemical resistant material should be worn. Wash contaminated clothing and dry thoroughly before reuse.

Footwear .................................................. No special footwear is required other than what is mandated at place of work.

Engineering Controls

Ventilation Requirements ......................... Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions should be provided to keep particulate below 10mg/m³. Supply sufficient replacement air to make up for air removed by exhaust systems.

Other ...................................................... Not Available

Section 09 - Physical and Chemical Properties

Physical State .......................................... Solid

Odor and Appearance ............................. Off-white powder and odorless

Odor Threshold ...................................... Not Available

Specific Gravity (Water=1) ...................... Not Available

Vapor Pressure (mm Hg, 20°C) .............. Not Available

Vapor Density (Air=1) .......................... Not Applicable

Evaporation Rate ................................. Not Available

Boiling Point ........................................ Not Available

Freeze/Melting Point ............................. 177°C

pH .......................................................... <1 (5% solution)

Water/Oil Distribution Coefficient .......... Not available

Bulk Density ........................................ 1.281-1.361 g/cm³

% Volatiles by Volume ......................... Not Available

Solubility in Water ................................. Partially soluble in hot and cold water.
Molecular Formula: \( \text{NaHSO}_4 \)
Molecular Weight: 120.06

Section 10 - Stability and Reactivity

Stability: Stable under normal conditions. Avoid storage where moisture is present.

Incompatibility: Incompatible with strong bases, hypochlorites and ammonium compounds.

Hazardous Products of Decomposition: Will dissolve in water to form a weak sulphuric solution. Upon decomposition due to extreme heating, oxides of sulphur may form. Reacts with strong bases to evolve heat. Reacts with hypochlorites to form poisonous chlorine gas.

Polymerization: Will not occur

Section 11 - Toxicological Information

Irritancy: Mild irritant

Sensitization: Not Available

Chronic/Acute Effects: None other than what is listed in Section 3.

Synergistic Materials: Not Available

Animal Toxicity Data: LD\(_{50}\) (oral, rat): 2800mg/kg

Carcinogenicity: Not considered to be carcinogenic by IARC, NTP, OSHA and ACGIH.

Reproductive Toxicity: Not Available

Teratogenicity: Not Available

Mutagenicity: Not Available
Section 12 - Ecological Information

Fish Toxicity.............................................. Product dissolves readily in water to form a weak acid, a 0.05% or greater (by weight) solution of this product is very likely to be harmful to aquatic life.

Biodegradability........................................... Material will decompose in soil. No adverse effects have been noticed when applied directly to crops.

Environmental Effects................................. Although material will decompose in soil, excessive quantities should not be applied. No other significant effects or hazards are known.

Section 13 - Disposal Consideration

Waste Disposal........................................... Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 14 - Transportation Information

TDG Classification

Class....................................................... 8
Group............................................... III

PIN Number.............................................. UN 3260

Other..................................................... Secure containers (full and/or empty) with suitable hold down devises during shipment.

Section 15 - Regulatory Information

WHMIS Classification................................. D2

NOTE: THE PRODUCT LISTED ON THIS MSDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS MSDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.
Section 16 - Other Information

Preparation Date: January 5, 2015
Revision Date: January 14, 2015
March 18, 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 / MSDS coordinator

As part of our commitment to the Canadian Association of Chemical Distributors (CACD) Responsible Distribution® initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that you forward the attached Material 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 or technical service department.

ClearTech Industries Inc. - Locations

Corporate Head Office: 1500 Quebec Avenue, Saskatoon, SK, S7K 1V7
Phone: 306-664-2522
Fax: 306-665-6216
www.ClearTech.ca

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