

BICARBONATE OF SODA

SECTION 1. IDENTIFICATION

Product Identifier	BICARBONATE OF SODA
Other Means of Identification	Bicarbonate of Soda
Product Family	Calcium Sequester
Recommended Use	Drilling Fluid Additive.
Supplier Identifier	Bri-Chem Supply Ltd., Bay 4, 5510 - 3rd Street SE, Calgary, Alberta, T2H 1J9, Bri-Chem Supply, 403-252-5904, www.brichemsupply.com
Emergency Phone No.	ChemTrec, (800) 424-9300, 24/7

SECTION 2. HAZARD IDENTIFICATION

Classification

Not classified under any hazard class.

Label Elements

Not applicable

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Sodium bicarbonate	144-55-8	100		

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Move to fresh air. Call a Poison Centre or doctor if you feel unwell.

Skin Contact

Immediately wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 15-20 minutes. If skin irritation occurs, get medical advice or attention.

Eye Contact

Check for and remove contact lenses. Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

Ingestion

If conscious give 2 to 4 glasses of water to drink but DO NOT induce vomiting. NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Immediately call a Poison Centre or doctor.

Immediate Medical Attention and Special Treatment

Special Instructions

Large doses may produce systemic alkalosis and expansion in extracellular fluid volume with edema.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Not combustible. Use extinguishing agent suitable for surrounding fire.

Specific Hazards Arising from the Product

Does not burn.

Carbon dioxide may be generated. Carbon dioxide is an asphyxiant at levels over 5% w/w. Sodium oxide, another thermal decomposition product existing at temperatures above 850°C (1562°F), is a respiratory, eye and skin irritant. Avoid inhalation, eye and skin contact with sodium oxide dusts.

Special Protective Equipment and Precautions for Fire-fighters

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet.

Environmental Precautions

It is good practice to prevent releases into the environment. Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Use appropriate safety equipment. Small spills, sweep up and put into approved DOT containers for disposal or re-use. Large spills, do not allow to enter waterways, sweep or shovel into approved DOT containers for re-use or disposal. Wash away small uncontaminated amounts of residue with water.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid ingestion. Practice reasonable caution and personal cleanliness. Avoid skin and eye contact.

Handle in accordance with good industrial hygiene and safety practice. It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling.

Conditions for Safe Storage

Store in a cool, dry, well-ventilated place. Keep container tightly closed and away from incompatible materials. Sodium Bicarbonate reacts with acids to yield carbon dioxide gas which can accumulate in confined spaces. Do not enter confined spaces until they have been well ventilated and carbon dioxide and oxygen levels have been determined to be safe.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne exposure limits: None established.

Appropriate Engineering Controls

Use general room dilution or local exhaust ventilation when excessive dust is expected in the work environment.

Individual Protection Measures

Eye/Face Protection

Wear safety glasses when handling bulk material or when dusts are generated.

Skin Protection

Wear protective clothing as required to prevent contact. Aprons should be worn where splashing may occur when working with solutions. General purpose gloves for handling dry product; impervious gloves when working with solutions.

Respiratory Protection

Dust safety masks are recommended where concentration of total dust is more than 10 mg/m³.

Product Identifier: BICARBONATE OF SODA - Ver. 1

Date of Preparation: December 29, 2020

Date of Last Revision: December 29, 2020

Page 02 of 05

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	White crystalline powder.
Odour	Odourless
pH	8.2 (1% solution)
Melting Point/Freezing Point	Not applicable (melting); Not applicable (freezing)
Initial Boiling Point/Range	Not applicable
Vapour Pressure	Not applicable
Vapour Density (air = 1)	Not applicable
Relative Density (water = 1)	2.16
Solubility	Moderately soluble (1-10%) in water
Other Information	
Physical State	Solid
Molecular Formula	NaHCO ₃
Molecular Weight	84.02
Bulk Density	993 kg/m ³ (62 lb/ft ³)

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

Not applicable.

Conditions to Avoid

Temperatures above 150.0 °F (65.6 °C)

Incompatible Materials

Reacts with acids to yield carbon dioxide. May also yield free caustic in the presence of lime dust (CaO) and moisture (i.e. water, perspiration). Dangerous reaction with monoammonium phosphate or a sodium-potassium alloy may occur.

Hazardous Decomposition Products

Heating above 100°C (212°F) may cause dangerous levels of carbon dioxide gas to be present in confined spaces. Yields sodium oxide if exposed to temperatures above 850°C (1562°F). Avoid inhalation, eye and skin contact with sodium oxide.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity

LC50 Inhalation Rat: >4.74 mg/L

LD50 Oral Rat: 7.3 g/kg

Skin Corrosion/Irritation

Repeated or prolonged exposure can irritate the skin.

Serious Eye Damage/Irritation

May cause mild irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May cause cough and some respiratory irritation.

Ingestion

Mild toxic by ingestion. May cause nausea, vomiting and abdominal pain. Doses over 5 Kg/Kg body weight can cause alkalosis and expansion in extracellular fluid volume with edema.

Product Identifier: BICARBONATE OF SODA - Ver. 1

Date of Preparation: December 29, 2020

Date of Last Revision: December 29, 2020

Page 03 of 05

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Repeated exposure may lead to dermatitis. Prolonged contact with dusts or vapours may cause conjunctivitis.

Respiratory and/or Skin Sensitization

Not a contact sensitizer.

Carcinogenicity

IARC: Group 3 – Not classifiable as to its carcinogenicity to humans. ACGIH®: A4 – Not classifiable as a human carcinogen. NTP: Not specifically listed. OSHA: Not specifically listed.

Not classified as carcinogenic by NTP, IARC, OSHA, ACGIH or NIOSH.

Reproductive Toxicity

Development of Offspring

Based on published studies on its effects in animals and humans, sodium bicarbonate is not teratogenic or genotoxic.

No information was located for: Development of Offspring, Sexual Function and Fertility, Germ Cell Mutagenicity, Interactive Effects

SECTION 12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY:

EC50 Daphnids: 4100 mg/L

LC50 Bluegill: 7100 mg/L

LC50 Rainbow Trout: 7700 mg/L.

Persistence and Degradability

This product is not expected to persist in the environment.

This product is inorganic and not subject to biodegradation.

Bioaccumulative Potential

This product is not expected to bioaccumulate.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Bury in a secured landfill in accordance with all local, provincial/state and federal environmental regulations. Empty containers may be incinerated or discarded as general trash.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations.

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

WHMIS 1988 Classification

Not a WHMIS controlled product.

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

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL/NDSL.

Product Identifier: BICARBONATE OF SODA - Ver. 1

Date of Preparation: December 29, 2020

Date of Last Revision: December 29, 2020

Page 04 of 05

SECTION 16. OTHER INFORMATION

SDS Prepared By Bri-Chem Supply Ltd

Phone No. (403) 252-5904

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Disclaimer This Health and Safety information is correct to the best of our knowledge and belief at the date of its publication, but we cannot accept liability for any loss, injury or damage which may result from its use. We shall ensure, so far as is reasonably practicable, that any revision of this Data Sheet is sent to all customers to whom we have directly supplied this substance, but must point out that it is the responsibility of any intermediate supplier to ensure that such revision is passed to the ultimate user. The information given in the Data Sheet is designed only as guidance for safe handling, storage, and the use of the substance. It is not a specification nor does it guarantee any specific properties. All chemicals should be handled only by competent personnel, within a controlled environment. Should further information be required, this can be obtained through the sales office whose address is at the top of this data sheet.

Product Identifier: BICARBONATE OF SODA - Ver. 1

Date of Preparation: December 29, 2020

Date of Last Revision: December 29, 2020

Page 05 of 05