

Section 1: Product & Company Information

Product Name: Bicarbonate of Soda
Chemical Family: Alkali
Product Use: Drilling Mud Additive

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	None	Not a Controlled Product	

Manufacturer Name: HiTech Fluid Systems
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General Phone Number: (403)547-2906
General Fax Number: (403)547-3129
MSDS Revision Date: June 1, 2008
Supercedes: June 23, 2005
Prepared By: HiTech Fluid Systems
Preparer's Phone: (403)547-2906

Section 2: Composition/Information on Ingredients

Chemical Name	Concentration	CAS#
Sodium Bicarbonate	100%	144-55-8

Section 3: Hazards Identification

Emergency Overview:

Routes of Entry:

Skin Contact: Yes
Skin Absorption: No
Eye Contact: Yes
Inhalation: Yes
Ingestion: Yes

Potential Health Effects:

Skin:	Prolonged exposure may cause irritation.
Eye:	May cause slight irritation and/or redness.
Inhalation:	May cause cough and some respiratory irritation.
Ingestion:	Mildly toxic by ingestion. May cause nausea, vomiting, and abdominal pains. Doses over 5g/kg body weight can cause alkalosis and expansion in extracellular fluid volume with edema.

Section 4: First Aid Measures

Eye Contact:	Flush eyes with water for at least 15 minutes. If adverse symptoms develop, seek medical attention.
Skin Contact:	Wash with soap and water. If adverse symptoms develop, seek medical attention.
Inhalation:	Remove patient to fresh air. If breathing has stopped, administer artificial respiration, and seek medical attention.
Ingestion:	If conscious, give 2 to 4 glasses of water to drink. DO NOT induce vomiting. Seek medical attention. Do not give anything by mouth to an unconscious or convulsing person.

Other First Aid:

Section 5: Fire Fighting Measures

Conditions Of Flammability:	Non-flammable. Does not support combustion or flame.
Extinguishing Media:	Not combustible. This material is used as a dry powder extinguishing agent suitable for all classes of fires.
Flashpoint:	N/A
Upper Flammable Limit:	N/A
Lower Flammable Limit:	N/A
Autoignition Temperature:	N/A
Protective Equipment:	N/A
Sensitivity To Impact or Static Discharge:	If extremely large quantities are involved, significant levels of carbon dioxide may be generated, making necessary the use of self-contained breathing apparatus. (Carbon dioxide is an asphyxiant at levels >5%). Soda ash, another decomposition product existing at temperatures >115°C, is a respiratory and skin irritant.
Hazardous Combustion Products:	N/A
Fire Comment:	

Section 6: Accidental Release Measures

- Personnel Precautions:** Use proper personal protective equipment as listed in section 8.
- Spill Cleanup Measures:** 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.

Section 7: Handling & Storage

- Handling:** Avoid ingestion. Practice reasonable caution and personal cleanliness. Avoid skin and eye contact.
- Storage:** Keep in a cool, dry place, in tightly closed containers away from acids. Long-term storage may result in caking.

Section 8: Exposure Controls, Personal Protection, Exposure Guidelines

- Engineering Controls:** Use general room dilution or local exhaust ventilation when excessive dust is expected in the work environment.
- Personal Protective Equipment:** Chemical-resistant clothing is recommended, including gloves, apron, and goggles.
- Respiratory Protection:** In absence of proper ventilation, recommended NIOSH-approved dust respirator.
- Exposure Limits:** As nuisance dust: 10 mg/m³ total dust; for 5 mg/m³ respirable dust. (ACGIH)

Chemical Name	ACGIH TLV-TWA	OSHA PEL-TWA
Sodium Bicarbonate	10 mg/m ³ (total dust) ; 5 mg/m ³ (respirable dust)	Not Available

Section 9: Physical & Chemical Properties

- Physical State:** Solid
- Odour And Appearance:** White granular; odourless
- Odour Threshold:** N/A
- Boiling Point:** N/A
- Evaporation Rate:** N/A
- Melting Point:** Releases <chemical>CO₂</>
- Freezing Point:** N/A
- Specific Gravity:** 2.16

Solubility in Water:	8.8 % by wt.@20C
Vapour Density:	N/A
Vapour Pressure:	N/A
pH:	N/A
Flash Point:	N/A
Volatility (% by volume):	N/A
Coefficient of Water to Oil distribution:	N/A

Section 10: Stability & Reactivity

Chemical Stability:	Yes
Hazardous Polymerization:	Will not occur.
Conditions Of Chemical Instability:	N/A
Incompatible Substances:	Reacts with acids to release CO ₂ gas and heat.
Special Decomposition Products:	The resulting dust may be irritating to the eyes and skin and respiratory tract.

Section 11: Toxicological Information

Chemical Name	LD ₅₀ (Oral Rat)	LD ₅₀ (Dermal Rabbit)	LC ₅₀ (Inhalation Rat)
Sodium Bicarbonate	4220 mg/kg	Not Determined	Not Determined

Effects Of Acute Exposure:	None known.
Effects Of Chronic Exposure:	Repeated exposure may lead to contact dermatitis. Prolonged contact with dusts or vapours may cause conjunctivitis.
General Irritancy Of Product:	Mild
Sensitization:	Not available
Carcinogenicity:	Not available
Reproductive Toxicity:	Not available
Teratogenicity:	Not available
Embryotoxicity:	Not Available
Mutagenicity:	Not available
Synergistic Products:	Not available

Section 12: Ecological Information

Ecotoxicity: Not Available

Environmental Fate: Not Available

Section 13: Disposal Considerations

Waste Disposal: All waste should be disposed of according to federal, provincial and local regulations. Containers should NOT be re-used. Containers should be disposed of in accordance with government regulations.

Section 14: Transport Information

TDG Classification: Not regulated

DOT UN Number: N/A

Shipping Notes: No special requirements

Section 15: Regulatory Information

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	None	Not a Controlled Product	

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16: Additional Information

MSDS Revision Date: June 1, 2008

MSDS Revision Notes:

MSDS Author: HiTech Fluid Systems

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