

Section 1: Product And Company Identification

Product Name: Bicarbonate Of Soda
Chemical Family: Alkali
Product Use: Drilling mud additive

Workplace Hazardous Information Systems Data:

Class ID	Class	Work Place Hazard
None	Not a Controlled Product	

Manufacturer Name: Alliance Energy Services Ltd.
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MSDS Revision Date: January 1, 2008
Supersedes: January 1, 2005
Prepared By: Alliance Energy Services Ltd.
Preparer's Phone: (403)663-9766

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: Mild 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 victim to fresh air. If breathing has stopped administer CPR and seek medical attention.
Ingestion: If conscious give 2 to 4 glasses of water to drink, but DO NOT induce vomiting. Get medical attention. Do not give anything by mouth to an unconscious or convulsing person.

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:	Not Applicable
Upper Flammable Limit:	Not Applicable
Lower Flammable Limit:	Not Applicable
Autoignition Temperature:	Not Applicable
Protective Equipment:	Not Applicable
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°, is a respiratory and skin irritant.
Hazardous Combustion Products:	Not Applicable
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 reuse. Large spills, do not allow to enter waterways, sweep or shovel into approved DOT containers for reuse or disposal.

Section 7: Handling And 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 glove, apron and goggles.
Respiratory Protection:	In absence of proper ventilation, recommended NIOSH approved dust respirator.
Exposure Limits:	As nuisance dust: 10 mg/m ³ total dust; for 5 mg/m ³ 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 And Chemical Properties

Physical State:	Solid
Odour And Appearance:	White granular; odourless
Odour Threshold:	Not Applicable
Boiling Point:	Not Applicable
Evaporation Rate:	Not Applicable
Melting Point:	Loses CO ₂ @ 270°C
Freezing Point:	Not Applicable
Density:	2.16
Vapour Density:	Not Applicable
Vapour Pressure:	Not Applicable

pH: Not applicable
Flash Point: Not Applicable
Volatility (% by volume): Not Applicable
Coefficient of Water to Oil distribution: Not Applicable

Section 10: Stability And Reactivity

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

Section 11: Toxicological Information

	LD50 (Oral Rat)	LD50 (Dermal Rabbit)	LC50 (Inhalation Rat)
Sodium Bicarbonate	4220 mg/m ³	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 reused. Containers should be disposed of in accordance with government regulations.

Section 14: Transport Information

TDG Classification: Not regulated
DOT UN Number: Not Applicable
Shipping Notes: No special requirements.

Section 15: Regulatory Information

Workplace Hazardous Information Systems Data (WHMIS):

Class ID	Class	Work Place 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: January 1, 2008

MSDS Revision Notes:

MSDS Author: Alliance Energy Services Ltd.

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