


Section 1: Product & Company Information

Product Name: Bentonite Natural Gel
Chemical Family: Sodium Montmorillonite
Product Use: Drilling Mud Additive

Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
	D-2-A	Materials Causing Other Toxic Effects - Very Toxic	Toxic effects

Manufacturer Name: HiTech Fluid Systems
Address: #1800, 505 3rd Street SW, Calgary, AB T2P 3E6 Canada
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#
Crystalline Silica, Quartz	2 - 6 %	14808-60-7

Section 3: Hazards Identification

Emergency Overview: Not available

Routes of Entry:

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

Potential Health Effects:

Skin:	Possible drying resulting in dermatitis
Eye:	May cause slight irritation and/or redness.
Inhalation:	Acute: (short term) exposure to dust levels exceeding PEL may cause irritation of respiratory tract, resulting in a dry cough. Chronic (long-term) exposure to airborne dust containing respirable size ($\leq 10 \mu\text{m}$) quartz particles, where respirable quartz particle levels are higher the TLVs, may lead to development of silicosis or other respiratory problems. Persistent dry cough and laboured breathing upon exertion may be symptomatic.
Ingestion:	No adverse effects

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:	Not Applicable
Other First Aid:	Not available

Section 5: Fire Fighting Measures

Conditions Of Flammability:	None. This product will not support combustion.
Extinguishing Media:	None for product. Any media can be used for packaging.
Flashpoint:	N/A
Upper Flammable Limit:	N/A
Lower Flammable Limit:	N/A
Autoignition Temperature:	N/A
Protective Equipment:	None. This product is non-flammable.
Sensitivity To Impact or Static Discharge:	Not available
Hazardous Combustion Products:	N/A
Fire Comment:	Product becomes slippery when wet.

Section 6: Accidental Release Measures

- Personnel Precautions:** Use proper personal protective equipment as listed in section 8.
- Spill Cleanup Measures:** Avoid breathing dust: wear respirator approved for silica bearing dust. Vacuum up to avoid generating airborne dust. Put into approved DOT containers for disposal.

Section 7: Handling & Storage

- Handling:** Avoid ingestion. Practice reasonable caution and personal cleanliness.
- Storage:** Store in a cool, dry, well ventilated place. Storage area floors may become slippery if wet.

Section 8: Exposure Controls, Personal Protection, Exposure Guidelines

- Engineering Controls:** Provide mechanical ventilation to prevent dust concentrations, and to reduce potential exposure.
- Personal Protective Equipment:** Chemical-resistant clothing is recommended, including gloves, apron, and goggles.
- Respiratory Protection:** Mechanical, general room ventilation. Use local ventilation to maintain PELs/TLVs.
- Exposure Limits:** Bentonite as "particulates not otherwise regulated" OSHA PEL (8hr. TWA) Total dust 15 mg/m³. Respirable dust 5 mg/m³. Crystalline Quartz (respirable) 0.1 mg/m³

Chemical Name	ACGIH TLV-TWA	OSHA PEL-TWA
Crystalline Silica, Quartz	0.05 mg/m ³	0.1 mg/m ³

Section 9: Physical & Chemical Properties

- Physical State:** Solid
- Odour And Appearance:** Tan to gray; odourless
- Odour Threshold:** Not available
- Boiling Point:** Not available
- Evaporation Rate:** Not available
- Melting Point:** Approx. 1450°C
- Freezing Point:** Not available
- Specific Gravity:** 2.45 - 2.55
- Solubility in Water:** Insoluble, forms colloidal suspension

Vapour Density:	Not available
Vapour Pressure:	Not available
pH:	8 - 10 (5% aqueous suspension)
Flash Point:	N/A
Volatility (% by volume):	Not available
Coefficient of Water to Oil distribution:	Not available

Section 10: Stability & Reactivity

Chemical Stability:	Yes
Hazardous Polymerization:	Will not occur
Conditions Of Chemical Instability:	N/A
Incompatible Substances:	N/A
Special Decomposition Products:	None known.

Section 11: Toxicological Information

Chemical Name	LD ₅₀ (Oral Rat)	LD ₅₀ (Dermal Rabbit)	LC ₅₀ (Inhalation Rat)
Crystalline Silica, Quartz	Not Available	Not Available	Not Available

Effects Of Acute Exposure:	Not available
Effects Of Chronic Exposure:	Not available
General Irritancy Of Product:	Not available
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

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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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