


## 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:**

<b>Skin:</b>	Possible drying resulting in dermatitis
<b>Eye:</b>	May cause slight irritation and/or redness.
<b>Inhalation:</b>	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.
<b>Ingestion:</b>	No adverse effects

**Section 4: First Aid Measures**

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<b>Eye Contact:</b>	Flush eyes with water for at least 15 minutes. If adverse symptoms develop, seek medical attention.
<b>Skin Contact:</b>	Wash with soap and water. If adverse symptoms develop, seek medical attention.
<b>Inhalation:</b>	Remove patient to fresh air. If breathing has stopped, administer artificial respiration, and seek medical attention.
<b>Ingestion:</b>	Not Applicable
<b>Other First Aid:</b>	Not available

**Section 5: Fire Fighting Measures**

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

## Section 6: Accidental Release Measures

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<b>Personnel Precautions:</b>	Use proper personal protective equipment as listed in section 8.
<b>Spill Cleanup Measures:</b>	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

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

## Section 8: Exposure Controls, Personal Protection, Exposure Guidelines

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<b>Engineering Controls:</b>	Provide mechanical ventilation to prevent dust concentrations, and to reduce potential exposure.
<b>Personal Protective Equipment:</b>	Chemical-resistant clothing is recommended, including gloves, apron, and goggles.
<b>Respiratory Protection:</b>	Mechanical, general room ventilation. Use local ventilation to maintain PELs/TLVs.
<b>Exposure Limits:</b>	Bentonite as "particulates not otherwise regulated" OSHA PEL (8hr. TWA) Total dust 15 mg/m <sup>3</sup> . Respirable dust 5 mg/m <sup>3</sup> . Crystalline Quartz (respirable) 0.1 mg/m <sup>3</sup>

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

## Section 9: Physical & Chemical Properties

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

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

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## Section 10: Stability & Reactivity

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

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## Section 11: Toxicological Information

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

<b>Effects Of Acute Exposure:</b>	Not available
<b>Effects Of Chronic Exposure:</b>	Not available
<b>General Irritancy Of Product:</b>	Not available
<b>Sensitization:</b>	Not available
<b>Carcinogenicity:</b>	Not available
<b>Reproductive Toxicity:</b>	Not available
<b>Teratogenicity:</b>	Not available
<b>Embryotoxicity:</b>	Not Available
<b>Mutagenicity:</b>	Not available
<b>Synergistic Products:</b>	Not available

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## Section 12: Ecological Information

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<b>Ecotoxicity:</b>	Not Available
<b>Environmental Fate:</b>	Not Available

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## Section 13: Disposal Considerations

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**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.

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## Section 14: Transport Information

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**TDG Classification:** Not regulated  
**DOT UN Number:** N/A  
**Shipping Notes:** No special requirements

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## Section 15: Regulatory Information

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### Workplace Hazardous Materials Information Systems Data (WHMIS):

	Class ID	Class	Workplace Hazard
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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.

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## Section 16: Additional Information

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**MSDS Revision Date:** June 1, 2008  
**MSDS Revision Notes:**  
**MSDS Author:** HiTech Fluid Systems

**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 a 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.