


## Section 1: Product & Company Information

**Product Name:** Lignite  
**Chemical Family:** North Dakota Crude Humic Acids  
**Product Use:** Drilling Fluid 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	6 %	14808-60-7
Humic Acid	90-100 %	1415-93-6

## Section 3: Hazards Identification

**Emergency Overview:** Not Applicable

### Routes of Entry:

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

**Potential Health Effects:**

<b>Skin:</b>	Prolonged exposure may cause irritation.
<b>Eye:</b>	Exposure may cause irritation to eyes and eyelids.
<b>Inhalation:</b>	Contains a small amount of crystalline silica, which may cause delayed respiratory disease if inhaled over a long period of time.
<b>Ingestion:</b>	May cause nausea.

**Section 4: First Aid Measures**

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<b>Eye Contact:</b>	Flush eyes with running water for at least 15 minutes. Seek immediate medical attention.
<b>Skin Contact:</b>	Wash with soap and water. If adverse symptoms persist, seek medical attention.
<b>Inhalation:</b>	Move patient to fresh air. If breathing has stopped, administer artificial respiration. If breathing is difficult, administer oxygen. Seek immediate medical attention.
<b>Ingestion:</b>	Drink water to dilute, then induce vomiting.
<b>Other First Aid:</b>	Not Applicable

**Section 5: Fire Fighting Measures**

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**Conditions Of Flammability:**

<b>Extinguishing Media:</b>	Dry chemical, carbon dioxide, foam, water
<b>Flashpoint:</b>	>400°F Cleveland Cup
<b>Upper Flammable Limit:</b>	Not Applicable
<b>Lower Flammable Limit:</b>	Not Applicable
<b>Autoignition Temperature:</b>	Not Applicable
<b>Protective Equipment:</b>	Firefighters must wear appropriate breathing apparatus and clothing.
<b>Sensitivity To Impact or Static Discharge:</b>	Not Applicable
<b>Hazardous Combustion Products:</b>	Not Determined
<b>Fire Comment:</b>	May explode if dust is suspended in air and ignition source is present. Granules burn similar to coal or wood.

## Section 6: Accidental Release Measures

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- 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

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- Handling:** Avoid ingestion. Practice reasonable caution and personal cleanliness. Avoid skin and eye contact.
- Storage:** Store in a cool, dry, well ventilated place. Keep container tightly closed and away from incompatible materials.

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

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- Engineering Controls:** Provide mechanical ventilation to prevent dust concentrations, and reduce potential exposure.
- Personal Protective Equipment:** Chemical-resistant clothing is recommended, including gloves, apron, and goggles.
- Respiratory Protection:** Recommend NIOSH-approved dust respirator.
- Exposure Limits:** Not Applicable

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>
Humic Acid	Not Available	Not Available

## Section 9: Physical & Chemical Properties

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- Physical State:** Solid
- Odour And Appearance:** Black brown powder; odourless
- Odour Threshold:** Not Applicable
- Boiling Point:** Not Applicable
- Evaporation Rate:** Not Applicable
- Melting Point:** Not Applicable
- Freezing Point:** Not Applicable
- Specific Gravity:** 1.6-1.8
- Solubility in Water:** Insoluble

<b>Vapour Density:</b>	Not applicable
<b>Vapour Pressure:</b>	Not Applicable
<b>pH:</b>	4.5
<b>Flash Point:</b>	>400°F Cleveland Cup
<b>Volatility (% by volume):</b>	Not Applicable
<b>Coefficient of Water to Oil distribution:</b>	Not Applicable

## 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>	
<b>Incompatible Substances:</b>	None known.
<b>Special Decomposition Products:</b>	When burned, carbon dioxide, sodium oxide, hydrocarbons, carbon monoxide

## 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
Humic Acid	Not Available	Not Available	Not Available

<b>Effects Of Acute Exposure:</b>	Not Applicable
<b>Effects Of Chronic Exposure:</b>	Contains a small amount of crystalline silica which may cause respiratory disease over a prolonged period of time.
<b>General Irritancy Of Product:</b>	This product contains silica dust. Excessive or prolonged inhalation of this product may cause permanent lung damage or possibly silicosis.
<b>Sensitization:</b>	Not Applicable
<b>Carcinogenicity:</b>	Not Applicable
<b>Reproductive Toxicity:</b>	Not Applicable
<b>Teratogenicity:</b>	Not Applicable
<b>Embryotoxicity:</b>	Not Available
<b>Mutagenicity:</b>	Not Applicable
<b>Synergistic Products:</b>	Not Applicable

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## Section 12: Ecological Information

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**Ecotoxicity:** Not Available

**Environmental Fate:** 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:** Not Regulated


**Shipping Notes:** No special requirements

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## Section 15: Regulatory Information

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

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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.