


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:

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

Section 4: First Aid Measures

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

Section 5: Fire Fighting Measures

Conditions Of Flammability:

Extinguishing Media:	Dry chemical, carbon dioxide, foam, water
Flashpoint:	>400°F Cleveland Cup
Upper Flammable Limit:	Not Applicable
Lower Flammable Limit:	Not Applicable
Autoignition Temperature:	Not Applicable
Protective Equipment:	Firefighters must wear appropriate breathing apparatus and clothing.
Sensitivity To Impact or Static Discharge:	Not Applicable
Hazardous Combustion Products:	Not Determined
Fire Comment:	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

- 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:** 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

- 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 ³	0.1 mg/m ³
Humic Acid	Not Available	Not Available

Section 9: Physical & Chemical Properties

- 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

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

Section 10: Stability & Reactivity

Chemical Stability:	Yes
Hazardous Polymerization:	Will not occur.
Conditions Of Chemical Instability:	
Incompatible Substances:	None known.
Special Decomposition Products:	When burned, carbon dioxide, sodium oxide, hydrocarbons, carbon monoxide

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
Humic Acid	Not Available	Not Available	Not Available

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

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: Not Regulated

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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