



# Black Hills Lignite, LLC MATERIAL SAFETY AND TRANSPORTATION DATA SHEET

## SECTION 1

## PRODUCT IDENTIFICATION

MANUFACTURERS NAME

Black Hills Bentonite, a Limited Liability Company

Trade Name: **Granular Bentonite**

TELEPHONE NO.

(307) 265-3740

ADDRESS

P.O. Box 9, Mills, WY 82644

CHEMICAL NAME AND SYNONYMS

Hydrous Silicate of Alumina / Wyoming Sodium Bentonite/Sodium Montmorillonite

CAS No. 1302-78-9

## SECTION 2

## HAZARDOUS INGREDIENTS

CAS #	Component	Percentage	Exposure Limit
14808-60-7	Crystalline Silica in the form of Quartz	>1%	PEL - See Below TLV - 0.05 mg/m <sup>3</sup> TWA (respirable fraction) MSHA - See Below

OSHA PEL and MSHA Exposure Limit for  $\frac{10\text{mg/m}^3}{\% \text{ Silica} +}$   
Crystalline Silica Quartz:  
(Respirable)<sup>2</sup>

National Institute for Occupational Safety and Health (NIOSH) has recommended that the permissible exposure limit be changes to 50 micrograms respirable free silica per cubic meter of air (0.05 mg/m<sup>3</sup>) as determined by a full shift sample up to 10 hour working day, 40 hours per week. The 1974 NIOSH Criteria for recommended Standard for Occupational Exposure to Crystalline Silica should be consulted for more detailed information.

PEL means OSHA Permissible Exposure Limit.

TLV means American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value.

MSHA means Mine Safety and Health Administration Exposure Limit.

TWA means 8 hour time weighted average.

Note: The Permissible Exposure Limits (PEL) reported above are the pre- 1989 limits that were reinstated by OSHA June 30, 1993 following a decision by the 11th Circuit Court of Appeals. These PELs are now being enforced by Federal OSHA. Be aware that more restrictive exposure limits may be enforced by some states, agencies or other authorities.

**SECTION 3**                      **PHYSICAL DATA**

BOILING POINT (°F) Not Applicable	SPECIFIC GRAVITY (H <sub>2</sub> O = 1) 2.6
VAPOR PRESSURE (mm Hg) Not Applicable	VAPOR DENSITY (AIR = 1) Not Applicable
EVAPORATION RATE Not Applicable	SOLUBILITY IN WATER Negligible
APPEARANCE AND ODOR Yellow, Blue, Brown granules or powder. Earthy odor.	DENSITY @ 20° C: UNCOMPACTED: 68 lbs/cubic foot

**HAZARDOUS MATERIALS IDENTIFICATION**

**DEGREE OF HAZARD**

<u>1</u> Health Hazard	4 = EXTREME
<u>0</u> Flammability	3 = High
<u>0</u> Reactivity	2 = Moderate
	1 = Slight
	0 = Insignificant

**SECTION 4**                      **FIRE AND EXPLOSION DATA**

FLASH POINT Not Applicable	FLAMMABLE LIMITS Non Flammable
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**SECTION 5**                      **HEALTH HAZARD DATA**

CARCINOGENICITY - SEE ROUTES OF EXPOSURE AND EFFECTS (BELOW)

ACUTE ORAL LD <sub>50</sub>	ACUTE DERMAL LD <sub>50</sub>	AQUATIC TOXICITY (LC <sub>50</sub> )
ND	ND	10,000 mg/l

Inhalation: Breathing prolonged and excessive amounts of Bentonite dust may not cause noticeable injury or illness even though permanent lung damage may be occurring.

Inhalation of dust may have the following serious chronic health effects:

Pneumoconiosis: Excessive inhalation of respirable dust may cause pneumoconiosis, a respiratory disease, which can result in delayed, progressive, disabling and sometimes fatal lung injury. Symptoms include cough, shortness of breath, wheezing, non-

specific chest illness and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with pneumoconiosis are predisposed to develop tuberculosis.

**Cancer Status:** The International Agency for Research on Cancer has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1 - carcinogenic to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (published in June 1997) in conjunction with the use of these materials. The National Toxicology Program classifies respirable crystalline silica as "known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

**Other Data with Possible Relevance to Human Health:**

There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin and other internal organs) and kidney disease.

For further information consult "Adverse Effects of Crystalline Silica Exposure" published by the American Thoracic Society Medical Section of the American Lung Association, American Journal of Respiratory and Critical Care Medicine Volume 155, pages 761-768, 1997.

**SKIN**  
Potential irritant.

**EYE**  
Potential irritant.

**INHALATION**  
Irritation to lungs, nose, and throat.

**EMERGENCY FIRST AID PROCEDURES**

**EYES:** Flush with water.     **SKIN:** Wash with soap and water.

If inhaled and effects occur, move to fresh air. If breathing is irregular, administer oxygen

**SECTION 6**

**REACTIVITY DATA**

**CONDITIONS CONTRIBUTING TO INSTABILITY**  
Stable

**INCOMPATIBILITY**  
None

**HAZARDOUS DECOMPOSITION PRODUCTS**  
None

**HAZARDOUS POLYMERIZATION**  
Will not occur.

**SECTION 7**

**SPILL OR LEAK PROCEDURES**

**STEPS TO TAKE IF MATERIAL IS RELEASED OR SPILLED**

If uncontaminated, sweep up or collect, and reuse product. Product becomes slippery when wet.

WASTE DISPOSAL METHOD  
Dispose of in accordance with all Federal, State and Local regulations.

NEUTRALIZING CHEMICALS  
Not Applicable

**SECTION 8**                      **SPECIAL PROTECTION INFORMATION**

RESPIRATORY PROTECTION  
Use NIOSH approved mechanical filter respirator for nontoxic dusts if dust concentration exceeds 10mg/m<sup>3</sup>

VENTILATION  
Sufficient to keep dust levels below the TLV for crystalline silica.

PROTECTIVE GLOVES  
General duty work gloves.

EYE PROTECTION  
If high dust conditions exist, tight fitting goggles are recommended.

OTHER PROTECTIVE EQUIPMENT  
Eyewash

**SECTION 9**                      **SPECIAL PRECAUTIONS**

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING  
Store out of the weather. Product becomes slippery when wet. Avoid contact water in walk areas.

OTHER PRECAUTIONS

PROPER SHIPPING NAME	PLACARDS	HAZARD CLASS
Not Regulated	None	Not Hazardous
REPORTABLE QUANTITY	HAZARDOUS SUBSTANCE	ID NUMBER
None	None	None

LABEL  
None Required

**SECTION 10**                      **REGULATORY INFORMATION**

SARA requires the submission of annual reports of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDS that are copied and distributed for this material. Components present in this product at a level which could require reporting under the statute are:

Chemical: CAS #:  
NONE

Toxic Substances Control Act (TSCA)

The ingredients of this product are on the TSCA inventory.

**SECTION 11**            **STATE RIGHT TO KNOW**

Quartz is a Canadian WHMIS (Workplace Hazardous Material Information System) Ingredient Disclosure List, Massachusetts Substance List, New Jersey Right to Know Hazardous Substance List, and Pennsylvania Hazardous Substance List.

PREPARED BY: BLACK HILLS BENTONITE, LLC.      DATE: FEBRUARY, 2001

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