



MATERIAL SAFETY DATA SHEET

SECTION I: IDENTIFICATION OF PRODUCT

PRODUCT NAME: Bentonite ABI Untreated

PRODUCT USE: Oil Well Fluid & Cement Additive **CAS No.** 1302-78-9 / 1318-93-0

CHEMICAL FAMILY: Natural mineral, Sodium Montmorillonite

WORK PLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

WHMIS CLASSIFICATION: D-2 (A)

WORK PLACE HAZARD: Potential Carcinogen; Contains Free Silica

TRANSPORTATION OF DANGEROUS GOODS (TDG)

SHIPPING NAME: Not Regulated Under TDG

TDG CLASSIFICATION: N/A

UN NUMBER (PIN): N/A

PACKING GROUP: N/A

SECTION II: HAZARDOUS INGREDIENTS

<u>INGREDIENT</u>	<u>PERCENT</u>	<u>CAS NUMBER</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Crystalline Quartz (respirable)	2 - 6	14808-60-7	0.1 mg/m ³	0.1 mg/m ³
Respirable Dust	Not Known	N/A	5 mg/m ³	5 mg/m ³
Total Dust	Not Known	N/A	15 mg/m ³	10 mg/m ³

Where cristobalite or tridymite are present use 1/2 of the PEL or TLV value for crystalline quartz.

SECTION III: TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY: SKIN EYE CONTACT INHALATION INGESTION

CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pulmonary and/or respiratory disease including but not limited to asthma and bronchitis should be precluded from exposure to dust from this product.

EYE CONTACT: Mechanical irritant.

SKIN CONTACT: Possible drying resulting in dermatitis.

INGESTION: No adverse effects.



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INHALATION: Acute (short term) exposure to dust levels exceeding the PEL may cause irritation of respiratory tract resulting in a dry cough. Chronic (long term) exposure to free silica containing airborne bentonite dust where levels are higher than TLV's may lead to development of silicosis or other respiratory problems. Persistent dry cough and laboured breathing upon exertion are symptomatic.

SECTION IV: FIRST AID MEASURES

SKIN CONTACT: Wash with soap and water until clean.

EYE CONTACT: Flush with water until irritation ceases.

INGESTION: No adverse effects.

INHALATION: Move to area free from dust. If symptoms or irritation persist contact physician. Inhalation may aggravate existing respiratory illness.

SECTION V: PHYSICAL DATA

APPEARANCE AND ODOUR: Blue-grey to green as moist solid, light tan to grey as dry powder; no odour

SPECIFIC GRAVITY: 2.45 - 2.55 g/cc

BOILING POINT (°C): N/A

MELTING POINT (°C): 1450°C

SOLUBILITY IN WATER: Insoluble, forms colloidal suspension

pH: 8 - 10 (5% aqueous suspension)

PERCENT VOLATILE BY VOLUME: N/A

EVAPORATION RATE: N/A

VAPOUR PRESSURE (mm Hg): N/A

BULK DENSITY (@ 20 °C): 880 kg/m³ as product

SECTION VI: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: N/A

FLAMMABLE LIMITS: N/A

EXTINGUISHING MEDIA: Any media can be used for packaging.

SPECIAL FIRE FIGHTING PROCEDURES: Inorganic Mineral/Non-Flammable.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None, product will not support combustion.



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SECTION VII: REACTIVITY DATA

STABILITY: Stable Unstable []

INCOMPATIBILITY (CONDITIONS TO AVOID): None

HAZARDOUS DECOMPOSITION PRODUCTS: None

HAZARDOUS POLYMERIZATION: Will Not Occur May Occur []

SECTION VIII: PREVENTIVE MEASURES

SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: NIOSH/MESA approved respirators for silica bearing dust.

VENTILATION: Use local ventilation to maintain PEL's / TLV's.

PROTECTIVE GLOVES: Generally not necessary; personal preference.

EYE PROTECTION: Suggest goggles.

OTHER PROTECTIVE EQUIPMENT (Specify): None Required.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Use NIOSH/MSHA respirators approved for silica bearing dust when free silica containing airborne bentonite dust levels exceed PEL/TLV's. Clean up spills promptly to avoid making dust. Storage area floors may become slippery if wetted. Avoid breathing dust; wear an approved respirator. Practice reasonable caution and personal cleanliness. Avoid eye contact.

STEPS TO BE TAKEN IN CASE THE MATERIAL IS SPILLED OR RELEASED

Avoid breathing dust; wear an approved respirator. Vacuum up to avoid generating airborne dust. Avoid using water. Product slippery when wet.

WASTE DISPOSAL METHOD

Product should be disposed of in accordance with applicable local, provincial, and federal regulations.

SECTION IX: PREPARATION

THE INFORMATION CONTAINED HEREIN IS GIVEN IN GOOD FAITH, BUT NO WARRANTY, EXPRESSED OR IMPLIED, IS MADE.

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