

SECTION I: IDENTIFICATION OF PRODUCT

COMPANY: **Diversity Technologies Corp.** DATE: **June 3, 2016**
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PRODUCT NAME: **Extra High Yield Bentonite**

PRODUCT USE: Drilling fluid & cement additive
 CHEMICAL FAMILY: Bentonite clay CAS #: 1302-78-9

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

WHMIS CLASSIFICATION: D2A
 WORKPLACE HAZARD: Potential carcinogen; contains crystalline silica

TRANSPORTATION OF DANGEROUS GOODS (TDG)

PROPER SHIPPING NAME: Not regulated under TDG
 TDG CLASSIFICATION: Not applicable
 UN NUMBER (PIN): Not applicable
 PACKING GROUP: Not applicable

SECTION II: HAZARDOUS INGREDIENTS

INGREDIENT	% (w/w)	CAS NUMBER	LD ₅₀ Oral-Rat	LC ₅₀ Inhal-Rat	ACGIH-TLV
Crystalline silica; quartz	2 – 6	14808-60-7	Not available	Not available	0.025 mg/m ³

SECTION III: HEALTH HAZARDS

ROUTE OF ENTRY: EYE CONTACT SKIN CONTACT INHALATION INGESTION
 EYE CONTACT: May cause mechanical irritation.
 SKIN CONTACT: Possible drying resulting in dermatitis.
 INGESTION: No adverse effects expected.
 INHALATION: Inhalation may cause irritation of the nose, throat and respiratory passages. Long-term inhalation may cause silicosis, a progressive, disabling and, sometimes, fatal lung disease. Chronic inhalation exposure to crystalline silica quartz has been observed to cause lymph node effects, kidney effects and auto-immune disease.

CARCINOGENICITY:	Bentonite is not listed as a carcinogen. Crystalline silica when inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans: The IARC has concluded that this chemical is carcinogenic to humans (Group 1). The ACGIH has designated this chemical as a suspected human carcinogen (A2). The US NTP has listed this chemical as a known human carcinogen.
TERATOGENICITY:	No information available.
REPRODUCTIVE TOXICITY:	No information available.
MUTAGENICITY:	Crystalline silica has been shown to cause mutagenic effects in human cells in-vitro.
SYNERGISTIC PRODUCTS:	No information available.

SECTION IV: FIRST AID MEASURES

SKIN CONTACT:	If irritation occurs or when shift ends, wash with soap and water until clean.
EYE CONTACT:	Flush with water until irritation ceases. If irritation persists, contact a physician.
INGESTION:	No first aid required; material is non-toxic.
INHALATION:	Move to area free from dust. Apply oxygen or artificial respiration if required. If breathing difficulties, or distress, continue obtain medical attention.

SECTION V: PHYSICAL DATA

APPEARANCE AND ODOUR:	Pale grey to buff powder, granule or tablet; no odour
SPECIFIC GRAVITY:	2.45 – 2.55
BOILING POINT (°C):	Not applicable
MELTING POINT (°C):	1450°C (approx)
SOLUBILITY IN WATER:	Insoluble
PERCENT VOLATILE BY VOLUME:	Not available
EVAPORATION RATE:	Not applicable
VAPOUR PRESSURE (mmHg):	Not applicable
VAPOUR DENSITY (air = 1):	Not applicable
BULK DENSITY:	55 lb/ft ³
	pH: 8-10 (5% aq. suspension)

SECTION VI: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:	Not applicable
FLAMMABLE LIMITS:	Not applicable
EXTINGUISHING MEDIA:	Use media suitable for and packaging and surrounding fire. Product becomes very slippery when wet, avoid using water as fire-fighting agent.
SPECIAL FIRE FIGHTING PROCEDURES:	Self-contained breathing apparatus required for fire-fighting personnel.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.
HAZARDOUS COMBUSTION PRODUCTS: No information available.

SECTION VII: REACTIVITY DATA

STABILITY: STABLE UNSTABLE
INCOMPATIBILITY (CONDITIONS TO AVOID): None known.
CONDITIONS OF REACTIVITY: Not available
HAZARDOUS DECOMPOSITION PRODUCTS: None known
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, process enclosure or other engineering controls to maintain airborne concentration of dust below TLV.
PROTECTIVE GLOVES: Generally not necessary; personal preference.
EYE PROTECTION: Suggest goggles.
OTHER PROTECTIVE EQUIPMENT (SPECIFY): Ensure emergency eye wash station and safety shower are available.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Avoid breathing dust; wear approved respiratory protection. Practice reasonable caution and personal cleanliness. Avoid eye contact. Store in cool, dry area. Empty packages contain residual hazardous material and should be handled as if full.

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

Avoid breathing dust; wear an approved respirator. Vacuum to avoid generating airborne dust. Avoid using water. Product slippery when wet. Collect uncontaminated material for repackaging. Collect contaminated material in an approved container for disposal.

WASTE DISPOSAL METHOD

Dispose in accordance with federal, provincial and local regulations. It is the responsibility of the end-user to determine if material meets the criteria of hazardous waste at the time of disposal. Empty packaging must be disposed of in accordance with local regulations.

SECTION IX: PREPARATION

The information contains herein is given in good faith, but no warranty, expressed or implied, is made.

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