



## EXTRA HIGH YIELD BENTONITE (ENVIROFLOC)

### 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 <sub>50</sub> Oral-Rat	LC <sub>50</sub> Inhal-Rat	ACGIH-TLV
Crystalline silica; quartz	2 – 6	14808-60-7	Not available	Not available	0.025 mg/m <sup>3</sup>

### 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                      pH: 8-10 (5% aq. suspension)

**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<sup>3</sup>

**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.

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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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