

**SECTION I: IDENTIFICATION OF PRODUCT**

COMPANY: **Diversity Technologies Corp.** DATE: **January 10, 2014**  
**8750 – 53<sup>rd</sup> Ave.** PHONE: **780-440-4923**  
**Edmonton, AB T6E 5G2** FAX: **780-469-1899**

PRODUCT NAME: **Enviroplug Fine, Medium & Coarse**

PRODUCT USE: Oilwell drilling fluid additive.  
 CHEMICAL FAMILY: Montmorillonite CAS #: 1302-78-9

**WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)**

WHMIS CLASSIFICATION: D2A  
 WORKPLACE HAZARD: Potential carcinogen; contains free 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
Silica, crystalline quartz	1-5 or 5-10*	14808-60-7	Not available	Not available	0.025 mg/m <sup>3</sup> (respirable)

\*The typical quartz content of western bentonite is between 2 and 6%.

**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: May cause irritation of the upper respiratory tract. This product contains crystalline silica. Breathing silica containing dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Chronic 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 by ACGIH, IARC, NTP or OSHA. Crystalline silica, when inhaled from occupational sources, is considered as a human carcinogen by IARC (Class 1) and by NTP. ACGIH classifies crystalline silica, quartz, as a suspected human carcinogen (A2).
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. If symptoms or irritation persist contact a physician. Inhalation may aggravate existing respiratory illness.

#### **SECTION V: PHYSICAL DATA**

APPEARANCE AND ODOUR:	Light tan to gray powder or granules; odourless
SPECIFIC GRAVITY:	2.45 – 2.55
BOILING POINT (°C):	Not applicable
MELTING POINT (°C):	~1450
SOLUBILITY IN WATER:	Insoluble                      pH: 8 – 10 (5% aq. sol'n)
PERCENT VOLATILE BY VOLUME:	Not applicable
EVAPORATION RATE:	Not applicable
VAPOUR PRESSURE (mmHg):	Not applicable
VAPOUR DENSITY (air = 1):	Not applicable
BULK DENSITY:	60 – 64 lbs/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 surrounding fire and packaging.
SPECIAL FIRE FIGHTING PROCEDURES:	Self-contained breathing apparatus required for fire-fighting personnel.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Product becomes very slippery when wet, avoid using water as firefighting agent.
HAZARDOUS COMBUSTION PRODUCTS:	No information available.

**SECTION VII: REACTIVITY DATA**

STABILITY:	<input checked="" type="checkbox"/> STABLE	<input type="checkbox"/> UNSTABLE
INCOMPATIBILITY (CONDITIONS TO AVOID):	None known. Avoid contact with hydrofluoric acid.	
CONDITIONS OF REACTIVITY:	Not available.	
HAZARDOUS DECOMPOSITION PRODUCTS:	None known.	
HAZARDOUS POLYMERIZATION:	<input checked="" type="checkbox"/> WILL NOT OCCUR	<input type="checkbox"/> MAY OCCUR

**SECTION VIII: PREVENTIVE MEASURES**

**SPECIAL PROTECTION INFORMATION**

RESPIRATORY PROTECTION:	NIOSH/MESA approved respirators for silica bearing dust.
VENTILATION:	Use local exhaust ventilation, process enclosure or other engineering controls to maintain concentration of airborne dust below TLV.
PROTECTIVE GLOVES:	Generally not necessary; personal preference.
EYE PROTECTION:	Suggest goggles or safety glasses.
OTHER PROTECTIVE EQUIPMENT (SPECIFY):	Ensure emergency eye wash station and safety shower are available.

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING**

Avoid creating dust. Avoid breathing dust; wear an approved respirator. Practice reasonable caution and personal cleanliness. Avoid eye contact. Store in cool, dry area. Empty packages contain residual hazardous material; handle as if full.

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

Wear an approved respirator. Vacuum if possible to avoid generating airborne dust. Collect uncontaminated material for repackaging. Collect contaminated material in an approved container for disposal. Avoid adding water; the product will become slippery when wet.

**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, or recycled, 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.

DATE ISSUED: **January 10, 2014**  
SUPERSEDES: **January 26, 2011**  
BY: Regulatory Affairs  
PHONE: 780-440-4923