

**SECTION I: IDENTIFICATION OF PRODUCT**

COMPANY: **Diversity Technologies Corp.** DATE: **February 9, 2016**  
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PRODUCT NAME: **Kelzan XCD**

PRODUCT USE: Oilwell drilling fluid additive.  
 CHEMICAL FAMILY: Polysaccharide gum CAS #: 11138-66-2

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

WHMIS CLASSIFICATION: Not a controlled product under WHMIS  
 WORKPLACE HAZARD: Treat as a nuisance dust; dust explosion hazard

**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 |
|--|---------|------------|---------------------------|----------------------------|-----------|
| Contains no WHMIS controlled ingredients |         |            |                           |                            |           |

**SECTION III: HEALTH HAZARDS**

ROUTE OF ENTRY:  EYE CONTACT  SKIN CONTACT  INHALATION  INGESTION  
 EYE CONTACT: Mechanical irritation due to dust. Contains glyoxal which causes eye irritation.  
 SKIN CONTACT: May cause irritation. Prolonged contact with skin may cause drying or chapping. No skin allergy observed in guinea pig following repeated skin exposure. Product contains an ingredient, glyoxal, at less than 1% which may cause sensitization of susceptible persons.  
 INGESTION: No adverse health effects expected. LD<sub>50</sub> (oral, rat) > 5000 mg/kg. No adverse effects observed in long-term feeding studies with rats (up to 1000 mg/kg/day).  
 INHALATION: Excessive inhalation of dust may cause mild irritation, coughing and/or sneezing. Hygroscopic properties of the gum can form a paste or gel in the airway.  
 CARCINOGENICITY: No information available.  
 TERATOGENICITY: No information available.

REPRODUCTIVE TOXICITY: No adverse effects were observed in a 3 generation reproduction study with rats (up to 500 mg/kg/day).  
MUTAGENICITY: No information available.  
SYNERGISTIC PRODUCTS: No information available.

#### **SECTION IV: FIRST AID MEASURES**

SKIN CONTACT: Wash with soap and water. If irritation develops, obtain medical attention.  
EYE CONTACT: Flush with gently flowing warm water until particles are removed. If irritation persists, obtain medical attention.  
INGESTION: Rinse out mouth and give one to two glasses of water to dilute material. Obtain medical attention. Never give anything by mouth if patient is unconscious, rapidly losing consciousness or convulsing.  
INHALATION: If symptoms develop move patient to fresh air. Give oxygen or apply artificial respiration if required. If symptoms persist or develop, obtain medical attention.

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

APPEARANCE AND ODOUR: White to tan powder; odourless  
SPECIFIC GRAVITY: Not available  
BOILING POINT (°C): Not available  
MELTING POINT (°C): Not available  
SOLUBILITY IN WATER: Soluble                                  pH: ~ 7 (1% solution)  
PERCENT VOLATILE BY VOLUME: Not available  
EVAPORATION RATE: Not applicable  
VAPOUR PRESSURE (mmHg): Not applicable  
VAPOUR DENSITY (air = 1): Not applicable  
BULK DENSITY: Not available

#### **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. Move containers from fire area if possible.  
UNUSUAL FIRE AND EXPLOSION HAZARDS: Dust clouds in air can create explosive mixtures in the presence of an ignition sources.  
HAZARDOUS COMBUSTION PRODUCTS: Oxides of carbon.

**SECTION VII: REACTIVITY DATA**

|  |  |                                    |
|--|--|------------------------------------|
| STABILITY:                             | <input checked="" type="checkbox"/> STABLE         | <input type="checkbox"/> UNSTABLE  |
| INCOMPATIBILITY (CONDITIONS TO AVOID): | Strong oxidizers. Avoid creating dust clouds.      |                                    |
| CONDITIONS OF REACTIVITY:              | Strong oxidizing agents.                           |                                    |
| HAZARDOUS DECOMPOSITION PRODUCTS:      | Oxides of carbon on combustion.                    |                                    |
| HAZARDOUS POLYMERIZATION:              | <input checked="" type="checkbox"/> WILL NOT OCCUR | <input type="checkbox"/> MAY OCCUR |

**SECTION VIII: PREVENTIVE MEASURES****SPECIAL PROTECTION INFORMATION**

|                                       |   |
|---------------------------------------|---|
| RESPIRATORY PROTECTION:               | Dust masks recommended. Use an approved respirator with dust cartridges if level of airborne dust exceeds TLV.  |
| VENTILATION:                          | General mechanical sufficient for normal conditions. Use local exhaust ventilation, process enclosure or other engineering controls to maintain level of airborne dust below TLV. |
| PROTECTIVE GLOVES:                    | Suggest impervious gloves.  |
| EYE PROTECTION:                       | Safety glasses with side-shields or goggles for dusty environments.   |
| OTHER PROTECTIVE EQUIPMENT (SPECIFY): | Ensure eyewash station and emergency shower are available.  |

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

Avoid skin and eye contact. Wash thoroughly after handling. Keep container closed. Launder contaminated clothing before reuse. Use in ventilated area. To maintain best product performances, store in a cool, dry place. Product is slippery when wet. Keep away from heat, sparks and open flames.

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

Use appropriate safety equipment. Avoid creating dust. Sweep up or vacuum to collect spilled material. Use non-sparking tools and/or equipment designed for combustible dust. Collect uncontaminated material for repackaging. Collect contaminated material in approved container(s) for disposal. Wet material will be extremely slippery.

**WASTE DISPOSAL METHOD**

Dispose/landfill in accordance with all federal, provincial and local regulations. Uncontaminated material can be landfilled in most locations; check with local operator. It is the responsibility of the end-user to determine if material meets the criteria of hazardous waste at the time of disposal.

**SECTION IX: PREPARATION**

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

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