

SECTION I: IDENTIFICATION OF PRODUCT

COMPANY: **Diversity Technologies Corp.** DATE: **February 21, 2017**
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PRODUCT NAME: **DRILLING DETERGENT L**

PRODUCT USE: Oilwell drilling fluid additive
 CHEMICAL FAMILY: Anionic surfactant blend CAS #: Mixture

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

WHMIS CLASSIFICATION: D1B; D2A; D2B
 WORKPLACE HAZARD: Acute toxic effects; toxic effects; skin & eye irritant

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
Ethylene glycol	15-40	107-21-1	4000 mg/kg	2725 mg/m ³ /4hr	100 mg/m ³
Secondary alcohol ethoxylate	97-100	84133-50-6	>412 mg/kg	1.06 mg/L/4hr	Not available

SECTION III: HEALTH HAZARDS

ROUTE OF ENTRY: EYE CONTACT SKIN CONTACT INHALATION INGESTION
 EYE CONTACT: May cause severe irritation based on ingredient information.
 SKIN CONTACT: Contact may cause moderate irritation based on ingredient information. Ethylene glycol has been shown to cause renal toxicity from dermal adsorption when tested in laboratory animals.

INGESTION:	May cause nausea, vomiting, diarrhea and possible liver and kidney damage. Swallowing large quantities may be toxic. Animal toxicity values do not meet criteria, but ethylene glycol is more toxic to humans and there is numerous human case reports of toxicity and death published in the literature. Ingestion of ethylene glycol can cause CNS depression (inebriation, convulsions and coma), metabolic acidosis, pulmonary oedema, cardio/respiratory effects and death. Ingestion of ethylene glycol has also been shown to cause adverse blood effects in laboratory animals.
INHALATION:	May cause headache, nausea and possible dizziness. Inhalation of vapour and mist of ethylene glycol at elevated temperatures, or in enclosed spaces, causes irritation of the nose and throat.
CARCINOGENICITY:	No information available.
TERATOGENICITY:	Ethylene glycol is teratogenic and embryotoxic in animal studies.
REPRODUCTIVE TOXICITY:	No information available.
MUTAGENICITY:	No information available.
SYNERGISTIC PRODUCTS:	No information available.

SECTION IV: FIRST AID MEASURES

SKIN CONTACT:	Wash with soap and plenty of water for at least 5 minutes. Remove contaminated clothing and footwear. If irritation persists, or develops, obtain medical attention.
EYE CONTACT:	Flush with gently flowing warm water for 30 minutes, or until irritation ceases. When flushing is complete obtain medical attention.
INGESTION:	Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. If conscious, rinse out mouth thoroughly with water. This product contains ethylene glycol, ingestion and lack of immediate medical attention may result in kidney and liver damage. Obtain medical attention or contact poison control centre immediately. Never give anything by mouth if victim is unconscious, rapidly losing consciousness or convulsing.
INHALATION:	Move to fresh air. Apply oxygen or artificial respiration if required. If breathing difficulties or distress continues, obtain medical attention.

SECTION V: PHYSICAL DATA

APPEARANCE AND ODOUR:	Medium blue liquid; petroleum odour
SPECIFIC GRAVITY:	1.05
BOILING POINT (°C):	~105
MELTING POINT (°C):	- 15
SOLUBILITY IN WATER:	Complete pH: 7.0 – 8.0
PERCENT VOLATILE BY VOLUME:	~ 75% at 105°C
EVAPORATION RATE:	Not determined
VAPOUR PRESSURE (mmHg):	Not determined

VAPOUR DENSITY (air = 1):
BULK DENSITY:

Not determined
Not applicable

SECTION VI: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:

> 100°C (TCC)

FLAMMABLE LIMITS:

Not determined

EXTINGUISHING MEDIA:

Use media suitable for surrounding material.

SPECIAL FIRE FIGHTING PROCEDURES:

Self-contained breathing apparatus required for fire-fighting personnel. Move containers from fire area, or cool with water spray, if possible.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Although this product is not considered flammable, loss of water in a fire situation may render the material combustible.

HAZARDOUS COMBUSTION PRODUCTS:

Oxides of carbon, nitrogen and sulfur on combustion.

SECTION VII: REACTIVITY DATA

STABILITY:

STABLE

UNSTABLE

INCOMPATIBILITY (CONDITIONS TO AVOID):

Avoid strong oxidizing agents, caustic solutions and water reactive materials.

CONDITIONS OF REACTIVITY:

Not available.

HAZARDOUS DECOMPOSITION PRODUCTS:

Not available.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

MAY OCCUR

SECTION VIII: PREVENTIVE MEASURES

SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

Not required under normal conditions of use. In the absence of adequate ventilation use approved respirators with organic vapour cartridges.

VENTILATION:

Not required for normal conditions of use. Use local exhaust ventilation, process enclosure or other engineering controls to maintain level of airborne mists or vapours below TLV.

PROTECTIVE GLOVES:

Suggest rubber or viton.

EYE PROTECTION:

Suggest chemical goggles and/or full-face shield be worn.

OTHER PROTECTIVE EQUIPMENT (SPECIFY):

Chemical resistant clothing as required preventing contact. Ensure eye wash station and emergency shower are available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Avoid ingestion. Avoid breathing vapours and mists. Avoid direct or prolonged contact with skin and eyes. Thoroughly clean contaminated clothing and footwear before rewearing. Store in a cool, dry area away from ignition sources and incompatible materials.

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

Use appropriate safety equipment. Dike to prevent spread of spilled material. Stop leak if possible to do so without risk. Small spills; soak up with absorbent materials. Large spills; collect uncontaminated material for repackaging, collect contaminated material in an approved container for disposal, treat remainder as a small spill. Collect absorbent material in approved container for disposal. Flush spill area thoroughly with water. Collect wash water in approved containers for disposal. Do not allow material to enter storm sewers or public waterways.

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 containers that have not been rinsed and purged, contain residual hazardous material and 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: **February 21, 2017**
SUPERSEDES: **February 28, 2014**
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