

# MATERIAL SAFETY DATA SHEET

## SECTION I: IDENTIFICATION OF PRODUCT

COMPANY: **Diversity Technologies Corp.** DATE: **December 4, 2007**  
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PRODUCT NAME: **Emul-Break**

PRODUCT USE: Drilling fluid emulsion preventer.  
CHEMICAL FAMILY: Surfactants blend in solvents. CAS#: Mixture

## WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

WHMIS CLASSIFICATION: B2; D1A; D2A; D2B; E  
WORKPLACE HAZARD: Flammable liquid; acute toxic effects; teratogenic and embryotoxic; carcinogenic; skin sensitizer; corrosive

## TRANSPORTATION OF DANGEROUS GOODS (TDG)

PROPER SHIPPING NAME: Flammable liquid, Corrosive, N.O.S. (methanol)  
TDG CLASSIFICATION: 3 (8)  
UN NUMBER (PIN): UN2924  
PACKING GROUP: II

## SECTION II: HAZARDOUS INGREDIENTS

<u>INGREDIENT</u>	<u>% (w/w)</u>	<u>CAS NUMBER</u>	<u>LD<sub>50</sub>Oral-Rat</u>	<u>LC<sub>50</sub>Inhal-Rat</u>	<u>ACGIH-TLV</u>
Xylene	40-70	1330-20-7	4300 mg/kg	6350 ppm/4hr	150 ppm
Methanol	5-10	67-56-1	5628 mg/kg	64000 ppm/4hr	250 ppm (skin)
Ethyl benzene	5-10	100-41-4	4300 mg/kg	>6700 ppm/hr	125 ppm
Alky Aryl sulphonic acid	1-5	Not available	Not available	Not available	Not listed
Isopropyl alcohol	0.1-1	67-63-0	4420 mg/kg	12000 ppm/4hr	400 ppm
Petroleum distillate	0.1-1	68477-31-6	2551 mg/kg	Not available	Not listed
Sulphuric acid	0.1-1	7664-93-9	2140 mg/kg	361 mg/m <sup>3</sup>	3 mg/m <sup>3</sup>
Monoethanolamine	0.1-1	141-43-5	2100 mg/kg	Not available	6 ppm
Naphthalene	0.1-1	91-20-3	490-1780 mg/kg	>170 mg/m <sup>3</sup> /4hr	15 ppm (skin)

## SECTION III: HEALTH HAZARDS

ROUTE OF ENTRY: [XX] EYE CONTACT [XX] SKIN [XX] INHALATION [XX] INGESTION

EYE CONTACT:	Vapours are irritating. Contact with liquid may cause severe irritation, redness and pain. Prolonged contact may cause burns. Corrosive effects may be delayed.
SKIN CONTACT:	Brief contact causes irritation. Prolonged contact may cause burns. Corrosive effects may be delayed. May be absorbed through the skin causing effects similar to ingestion. Naphthalene may cause skin sensitization or other allergic responses.
INGESTION:	Will cause severe burning and pain in the mouth, throat and abdomen. Vomiting, diarrhea and perforation of the esophagus and stomach lining may occur. May cause central nervous system depression, hearing loss, cardiac arrhythmia, liver damage, kidney damage, coma and possibly death. Methanol may cause blurring of vision to complete blindness. Symptoms usually develop 12 to 18 hours after exposure.
INHALATION:	May cause severe irritation of the nose, throat and respiratory tract. May cause effects similar to ingestion including vision disturbances. Xylene may sensitize heart muscle causing cardiac arrhythmia, in rare cases.
CARCINOGENICITY:	Ethyl benzene is classed by IARC Group 2B and ACGIH A3 as a possible human carcinogen. IARC have concluded that occupational exposure to strong inorganic acid mists containing sulphuric acid is carcinogenic to humans. IARC has concluded there is sufficient evidence for the carcinogenicity of naphthalene in experimental animals (Group 2B).
TERATOGENICITY:	Some animal studies indicate excessive exposure to xylene during pregnancy may be hazardous to the developing fetus. Methanol has produced fetotoxicity in rats and teratogenicity in mice exposed by inhalation to high concentrations that did not produce significant maternal toxicity. Isopropanol has shown fetotoxicity in an inhalation rat study in the absence of maternal toxicity; an oral rat study showed reduced survival in the early postnatal period, in the presence of minimal maternal toxicity.
REPRODUCTIVE TOXICITY:	No information available.
MUTAGENICITY:	No information available.
SYNERGISTIC PRODUCTS:	The toxicity of ethylbenzene can probably be increased by exposure to alcohols or other chemicals which inhibit its breakdown in the liver.

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

EYE CONTACT:	Immediately flush with gently flowing warm water for at least 20 minutes, or until irritation ceases. Hold eyelids open. When flushing time is completed obtain medical attention.
SKIN CONTACT:	Immediately flush with water for at least 30 minutes while removing contaminated clothing. Launder contaminated clothing before reuse. Discard contaminated leather articles. Obtain medical attention.

**INGESTION:** Immediately contact local poison control center. Rinse mouth and give one-half to one glass of water. Do not induce vomiting. If spontaneous vomiting occurs, keep head below hips to ensure vomitus is not aspirated, and re-administer water. Seek immediate medical attention. Never give anything by mouth to an unconscious or convulsing victim.

**INHALATION:** Move victim to fresh air. Give oxygen or apply artificial respiration if required. Obtain immediate medical attention.

### SECTION V: PHYSICAL DATA

APPEARANCE AND ODOUR:	Dark red liquid; aromatic odour	
SPECIFIC GRAVITY:	0.92 – 0.94	
BOILING POINT (°C):	65	
MELTING POINT (°C):	-35	
SOLUBILITY IN WATER:	Not soluble	pH : 7.7 - 8.64 (1% in IPA/H <sub>2</sub> O 50/50)
PERCENT VOLATILE BY VOLUME:	60 –80	
EVAPORATION RATE:	Not available	
VAPOUR PRESSURE (mmHg):	Not available	
VAPOUR DENSITY (air = 1):	Not available	
BULK DENSITY:	Not applicable	

### SECTION VI: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:	11°C estimated (TCC)	
FLAMMABLE LIMITS:	LEL= 1.1% (estimated) UEL= 36.5% (estimated)	
EXTINGUISHING MEDIA:	CO <sub>2</sub> , dry chemical, foam, water fog.	
SPECIAL FIRE FIGHTING PROCEDURES:	Self-contained breathing apparatus required for fire fighting personnel. Remove containers from fire area, or cool with water spray, if possible.	
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Vapours may form explosive mixture in air. Vapours can travel to a source of ignition and flash back.	

### SECTION VII: REACTIVITY DATA

STABILITY:	STABLE [XX]	UNSTABLE [ ]
INCOMPATIBILITY (CONDITIONS TO AVOID):	Avoid contact with strong oxidizing and reducing agents, mineral acids, halogens, activated carbon, aluminum and its alloys and strong bases. Avoid high temperatures, open flames, sparks and all other sources of ignition.	
CONDITIONS OF REACTIVITY:	Not available	

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon, nitrogen and sulphur, formaldehyde and other irritating gases on combustion.  
 HAZARDOUS POLYMERIZATION: WILL NOT OCCUR [XX] MAY OCCUR [ ]

## **SECTION VIII: PREVENTATIVE MEASURES**

### **SPECIAL PROTECTION INFORMATION**

RESPIRATORY PROTECTION: Use an approved respirator with organic vapour cartridges or SCBA if engineering controls cannot control vapours.

VENTILATION: Use local exhaust ventilation, process enclosure or other engineering controls to prevent contact with vapours. Ensure all equipment is explosion proof.

PROTECTIVE GLOVES: Suggest viton.

EYE PROTECTION: Chemical goggles and/or face shield recommended.

OTHER PROTECTIVE EQUIPMENT (Specify): Chemical resistant protective clothing. Ensure emergency shower and eye wash station are available.

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

Avoid inhalation of vapours and mists. Do not get on skin, in eyes or on clothing. Keep container closed when not in use. Use with adequate ventilation. Avoid contact with incompatible materials. Store in a cool, dry, well-ventilated area away from sources of heat, ignition and sparks. Use proper grounding techniques when transferring to prevent static charge buildup. Store unused material in original container. Handle empty containers as if full.

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

Use appropriate safety equipment. Eliminate all sources of ignition. Evacuate nonessential personnel. Stop leak if possible to do so without risk. Small spills; soak up using absorbent. Large spills; dike to contain material, collect material using explosion proof pump, soak up residual using absorbent. Collect contaminated material and absorbents in approved containers for disposal. Collect uncontaminated material for repackaging. Do not allow this product to enter sewers or storm water inlets. Clean spill area thoroughly with soap and water. Collect wash water in approved containers 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 containers that have not been cleaned and purged, contain residual material and must be disposed of, or recycled, in accordance with local regulations.

**SECTION IX: PREPARATION**

THE INFORMATION CONTAINED HEREIN IS GIVEN IN GOOD FAITH,  
BUT NO WARRANTY, EXPRESSED OR IMPLIED, IS MADE.

DATE ISSUED: December 4, 2007

BY: Product safety committee

SUPERSEDES: January 17, 2005

PHONE: 780-440-4923

**Diversity Technologies Corp. is the parent company of  
Canamara-United Supply, Hollimex Products, The Drilling Depot and  
Westcoast Drilling Supplies.**