

# MATERIAL SAFETY DATA SHEET

## SECTION I: IDENTIFICATION OF PRODUCT

COMPANY: **Diversity Technologies Corp.** DATE: **January 26, 2010**  
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PRODUCT NAME: **CAN-BREAK ECA**

PRODUCT USE: Enzyme breaker for water-based drilling fluids.  
CHEMICAL FAMILY: Mixture CAS#: Mixture

## WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

WHMIS CLASSIFICATION: D2A; D2B  
WORKPLACE HAZARD: Respiratory tract sensitizer; skin and 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

<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>
Citric acid	30-60	77-92-9	3000 mg/kg	Not available	Not established
a-Amalyse	1-5	9000-90-2	Not available	Not available	Not available

## SECTION III: HEALTH HAZARDS

ROUTE OF ENTRY: [XX]EYE CONTACT [XX]SKIN [XX]INHALATION [XX]INGESTION  
EYE CONTACT: Dusts and solutions can cause severe irritation and corrosive injury (destruction of eye tissue), based on animal information. Depending on the concentration of the solution and the degree of exposure, permanent eye damage, including blindness may result.  
SKIN CONTACT: Dusts and solutions can cause severe irritation and corrosive injury, based on animal information.  
INGESTION: Ingestion of large amounts may cause stomach pain and vomiting.

INHALATION:	Dusts and mists from solutions may cause temporary irritation of the nose and throat. The severity of these effects would depend on the airborne concentration, concentration of the solution and the duration of exposure. Repeated inhalation of enzyme aerosols may cause respiratory tract sensitization in susceptible individuals.
CARCINOGENICITY:	No information available.
TERATOGENICITY:	No information available.
REPRODUCTIVE TOXICITY:	No information available.
MUTAGENICITY:	No information available.
SYNERGISTIC PRODUCTS:	No information available.

#### SECTION IV: FIRST AID MEASURES

EYE CONTACT:	Immediately flush with gently flowing warm water for at least 15 minutes. Hold eyelids open to ensure thorough flushing. Obtain medical attention.
SKIN CONTACT:	Immediately flush with water. Removing contaminated clothing and footwear. If irritation persists obtain medical attention.
INGESTION:	Do not induce vomiting. Rinse mouth thoroughly with water. Have victim drink 1 to 2 glasses of water to dilute material in stomach. If milk is available, it may be administered after the water has been given. If vomiting occurs keep head below hips to prevent aspiration of vomitus; repeat administration of water. Obtain medical attention. Never give anything by mouth if patient 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, contact a physician.

#### SECTION V: PHYSICAL DATA

APPEARANCE AND ODOUR:	White granular powder; odourless
SPECIFIC GRAVITY:	1.54
BOILING POINT (°C):	Not available
MELTING POINT (°C):	Not available
SOLUBILITY IN WATER:	162 g/100 mL                      pH : 2.6 (10% wt/v)
PERCENT VOLATILE BY VOLUME:	Not available
EVAPORATION RATE:	Not available
VAPOUR PRESSURE (mmHg):	Not available
VAPOUR DENSITY (air = 1):	Not available
BULK DENSITY:	Not available

**SECTION VI: FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT:	Not applicable
FLAMMABLE LIMITS:	Not available
EXTINGUISHING MEDIA:	Water, dry chemical or foam.
SPECIAL FIRE FIGHTING PROCEDURES:	Self-contained breathing apparatus required for fire fighting personnel.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	It has been reported that under certain conditions, airborne dust of citric acid can explode when ignited by an electrostatic spark, other high-voltage sparks or other ignition source.

**SECTION VII: REACTIVITY DATA**

STABILITY:	STABLE [XX]	UNSTABLE [ ]
INCOMPATIBILITY (CONDITIONS TO AVOID):	Strong oxidizing agents, strong reducing agents, strong bases, metal nitrates, alkali metals, organic acids and oxides of sulphur. Mildly corrosive to carbon steel, gray and nickel cast iron, copper, brass, aluminum and lead.	
CONDITIONS OF REACTIVITY:	Not available.	
HAZARDOUS DECOMPOSITION PRODUCTS:	Oxides of carbon on combustion.	
HAZARDOUS POLYMERIZATION:	WILL NOT OCCUR [XX]	MAY OCCUR [ ]

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

RESPIRATORY PROTECTION:	NIOSH approved dust mask recommended.
VENTILATION:	Use local ventilation, process enclosure or other engineering controls to keep airborne dust to a minimum
PROTECTIVE GLOVES:	Suggest plastic or rubber.
EYE PROTECTION:	Suggest chemical goggles and/or full-face shield. Do not wear contact lenses when handling this material.
OTHER PROTECTIVE EQUIPMENT (Specify):	Full body covering clothing recommended. Ensure eye wash and emergency shower are available

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

Wear suitable protective equipment to prevent skin and eye contact. Avoid inhalation and ingestion. Wash thoroughly after use. Thoroughly clean contaminated clothing and footwear before reuse. Store in a cool, dry area away from incompatibles. Keep containers closed when not in use. Aqueous solutions can, if in contact with reactive metal (iron, zinc, aluminum) form hydrogen which may form explosive mixtures. Avoid creating dust clouds when handling. Empty packages will contain residual hazardous material; handle as if full.

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

Use appropriate safety equipment. Sweep up to collect. Collect uncontaminated material for repackaging. Collect contaminated material in an approved container for disposal. Avoid creating dust clouds.

### **WASTE DISPOSAL METHOD**

Dispose in accordance with federal, provincial and local regulations. Material is biodegradable in waste treatment facility. It is the responsibility of the end-user to determine if material meets the criteria of hazardous waste at the time of disposal. Empty packages will contain residual hazardous material and must be disposed of 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: **January 26, 2010**

BY: Product safety committee

SUPERSEDES: **January 26, 2007**

PHONE: 780-440-4923

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