

# MATERIAL SAFETY DATA SHEET

## SECTION I: IDENTIFICATION OF PRODUCT

COMPANY: **Diversity Technologies Corp.** DATE: **August 7, 2008**  
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PRODUCT NAME: **Caustic Soda (Sodium Hydroxide)**

PRODUCT USE: Oil well drilling fluid additive  
CHEMICAL FAMILY: Inorganic sodium salt CAS#: 1310-73-2

## WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

WHMIS CLASSIFICATION: E  
WORKPLACE HAZARD: Corrosive solid

## TRANSPORTATION OF DANGEROUS GOODS (TDG)

PROPER SHIPPING NAME: Sodium hydroxide, solid  
TDG CLASSIFICATION: 8  
UN NUMBER (PIN): UN1823  
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>
Sodium hydroxide	95-99	1310-73-2	No information	No information	2 mg/m <sup>3</sup> ceiling

## SECTION III: HEALTH HAZARDS

ROUTE OF ENTRY: [XX] EYE CONTACT [XX] SKIN [XX] INHALATION [XX] INGESTION  
EYE CONTACT: Corrosive! May cause severe damage including burns and blindness. Severity of effects depends on concentration and how soon after exposure the eyes are washed.  
SKIN CONTACT: Corrosive! May cause severe burns and tissue destruction. There may be a delay between the time of exposure and the onset of irritation depending on the concentration of the product. Prolonged or repeated contact, even to dilute solutions, can cause a high degree of tissue destruction.  
INGESTION: Corrosive! May cause severe burns and complete tissue perforation of mucous membranes of mouth, throat and stomach.

INHALATION:	Exposure to powder, vapour, mist or liquid can produce burns of the respiratory tract. Severe exposures could result in pulmonary edema.
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 eyes with running water for at least 60 minutes. Hold eyelids apart to ensure thorough flushing. Flushing within seconds of contact is essential to achieve maximum effectiveness. Continue flushing until irritation or burning ceases, then obtain medical attention.
SKIN CONTACT:	Flush thoroughly with water while removing contaminated clothing and footwear. Obtain medical attention.
INGESTION:	Do not induce vomiting. If conscious rinse out mouth and give 1 to 2 glasses of water to drink. If vomiting occurs keep head below hips to prevent aspiration and then give water. Repeat drinks of water every 10 minutes. Obtain immediate medical attention. Never give anything by mouth unless victim is fully conscious.
INHALATION:	Move to area free from contaminant. Apply oxygen or artificial respiration if required. Obtain medical attention.

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

APPEARANCE AND ODOUR:	White beads odourless
SPECIFIC GRAVITY:	2.13
BOILING POINT (°C):	1390
MELTING POINT (°C):	318
SOLUBILITY IN WATER:	Completely soluble    pH: 13.0 (1% solution)
PERCENT VOLATILE BY VOLUME:	Not applicable
EVAPORATION RATE:	Not applicable
VAPOUR PRESSURE (mmHg):	42 @ 1000°C
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 packaging and surrounding materials.
SPECIAL FIRE FIGHTING PROCEDURES:	Self-contained breathing apparatus required for fire fighting personnel
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Contact with water can cause violent exothermic reaction.

**SECTION VII: REACTIVITY DATA**

STABILITY:	STABLE <input checked="" type="checkbox"/>	UNSTABLE <input type="checkbox"/>
INCOMPATIBILITY (CONDITIONS TO AVOID):	Strong acids; may react violently. Water; may generate sufficient heat to ignite combustibles. May react with organ halogen compounds, nitro and chloro organic compounds, and reducing sugars and whey solids.	
CONDITIONS OF REACTIVITY:	Not available	
HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon monoxide	
HAZARDOUS POLYMERIZATION:	WILL NOT OCCUR <input checked="" type="checkbox"/>	MAY OCCUR <input type="checkbox"/>

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

RESPIRATORY PROTECTION:	Approved dust masks required for dust levels below TLV. Use approved respirators with dust cartridges, or SCBA, if airborne concentration exceeds TLV.
VENTILATION:	Use local exhaust ventilation, process enclosure or other engineering controls to maintain concentration of airborne dust below TLV.
PROTECTIVE GLOVES:	Rubber, neoprene or vinyl recommended.
EYE PROTECTION:	Chemical goggles with full face-shield recommended. Do not wear contact lenses.
OTHER PROTECTIVE EQUIPMENT (Specify):	As required to prevent contact. Ensure eyewash station and emergency shower are available.

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

Wear personal protective equipment. Wash thoroughly after handling. Avoid contact with skin and eyes. Avoid ingestion. Discard non-rubber shoes. Discard contaminated leather articles (belts, watchbands, etc). Wash clothing before reuse. When mixing with water add product slowly, with constant stirring, to water. Ensure temperature of water does not exceed 95°C to prevent boiling. Store in a cool, well-ventilated area away from incompatibles. Keep container tightly closed and properly labeled. Empty packages contain residual hazardous material and must be handled with the same care and attention as is full.

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

Use appropriate safety equipment. Evacuate unnecessary personnel. Collect dry material by shoveling, liquid material can be removed with a vacuum truck. Collect uncontaminated material for repackaging. Collect contaminated material in an approved container for disposal. Flush spill area thoroughly with water.

### **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 contains residual hazardous material and must be disposed of according to local regulations.

### **SECTION IX: PREPARATION**

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

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BY: Product Safety Committee  
PHONE: 780-440-4923

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