

# MATERIAL SAFETY DATA SHEET

## SECTION I: IDENTIFICATION OF PRODUCT

COMPANY: **Diversity Technologies Corp.** DATE: **November 6, 2009**  
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PRODUCT NAME: **Magnesium Oxide**

PRODUCT USE: Oilwell drilling fluid additive  
CHEMICAL FAMILY: Inorganic oxide buffer CAS #: 1309-48-4

## WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

WHMIS CLASSIFICATION: Not WHMIS classified.  
WORKPLACE HAZARD: Treat as a nuisance dust.

## 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>
Magnesium oxide	94 - 98	1309-48-4	Not available	Not available	10 mg/m <sup>3</sup>
Calcium oxide	1.5 - 4	1305-78-8	Not available	Not available	2 mg/m <sup>3</sup>

## SECTION III: HEALTH HAZARDS

ROUTE OF ENTRY: [XX] EYE CONTACT [XX] SKIN [XX] INHALATION [XX] INGESTION  
EYE CONTACT: May cause irritation.  
SKIN CONTACT: May irritate and dry the skin.  
INGESTION: No significant effects expected.

INHALATION:	May cause irritation of the upper respiratory tract. Inhalation of magnesium fume may cause metal fume fever; however, no evidence of metal fume fever resulting from industrial exposure to magnesium fume has been found. Symptoms of metal fume fever include; cough, tightness of chest, sweating, headache, fever, muscle aches, nausea, vomiting and tiredness.
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

SKIN CONTACT:	If irritation occurs, or when shift ends, wash with soap and water. If irritation persists, obtain medical attention.
EYE CONTACT:	Flush with gently flowing warm water for 10 minutes or until irritation ceases. Obtain medical attention.
INGESTION:	Rinse mouth with and/or drink water. Obtain medical advice. Never give anything by mouth to an unconscious or convulsing victim.
INHALATION:	Move to fresh air. Apply oxygen or artificial respiration as required. If breathing difficulties, or distress, continue obtain medical attention.

#### SECTION V: PHYSICAL DATA

APPEARANCE AND ODOUR:	White to light brown powder; no odour
SPECIFIC GRAVITY:	3.6
BOILING POINT (°C):	~3600
MELTING POINT (°C):	~2800
SOLUBILITY IN WATER:	Not available                      pH: 10.3 (sat'd sol'n)
PERCENT VOLATILE BY VOLUME:	Not applicable
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 flammable
FLAMMABLE LIMITS:	Not applicable

EXTINGUISHING MEDIA:	Use media suitable for surrounding materials and packaging.
SPECIAL FIRE FIGHTING PROCEDURES:	Self-contained breathing apparatus required for fire fighting personnel.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Not known.

### SECTION VII: REACTIVITY DATA

STABILITY:	STABLE [XX]	UNSTABLE [ ]
INCOMPATIBILITY (CONDITIONS TO AVOID):	Interhalogens (eg. Bromine pentafluoride), phosphorus pentachloride and strong acids. Avoid contact with water; product reacts exothermically with water to form magnesium hydroxide and heat/steam.	
CONDITIONS OF REACTIVITY:	Contact with incompatible materials.	
HAZARDOUS DECOMPOSITION PRODUCTS:	Magnesium fume may be generated if heated to volatilization. Heat and steam may be generated upon contact with water.	
HAZARDOUS POLYMERIZATION:	WILL NOT OCCUR [XX]	MAY OCCUR [ ]

### SECTION VIII: PREVENTATIVE MEASURES

#### SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:	Suggest approved dust mask. Use approved respirator with dust/mist cartridges if TLV is exceeded.
VENTILATION:	Use local exhaust ventilation, process enclosure or other engineering controls to maintain PEL's/TLV's
PROTECTIVE GLOVES:	Personal preference.
EYE PROTECTION:	Safety glasses or goggles recommended.
OTHER PROTECTIVE EQUIPMENT (Specify):	Ensure eyewash station and emergency shower are available.

### PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Avoid creating dust. Avoid breathing dust; wear an approved respirator. Avoid eye contact. Practice reasonable caution and personal cleanliness. Launder contaminated clothing before reuse. Store in cool, dry area away from incompatibles.

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

Use appropriate safety equipment. Vacuum up, if possible, to avoid generating airborne dust. Collect uncontaminated material for repackaging. Collect contaminated material in approved containers for disposal. Flush spill area thoroughly with water.

**WASTE DISPOSAL METHOD**

Dispose of 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.

**SECTION IX: PREPARATION**

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

DATE ISSUED:	November 6, 2009	BY:	Product safety committee
SUPERSEDES:	November 3, 2006	PHONE:	780-440-4923

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