

**POTASSIUM CHLORIDE (POTASH)**

**SECTION I: IDENTIFICATION OF PRODUCT**

COMPANY: **Diversity Technologies Corp.** DATE: **January 18, 2013**  
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PRODUCT NAME: **POTASSIUM CHLORIDE (Potash)**

PRODUCT USE: Oilwell drilling fluid and cement additive.  
 CHEMICAL FAMILY: Inorganic salt CAS #: 7447-40-7

**WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)**

WHMIS CLASSIFICATION: Not WHMIS controlled.  
 WORKPLACE HAZARD: Treat as 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**

INGREDIENT	% (w/w)	CAS NUMBER	LD <sub>50</sub> Oral-Rat	LC <sub>50</sub> Inhal-Rat	ACGIH-TLV
Contains no WHMIS controlled ingredients.					

**SECTION III: HEALTH HAZARDS**

ROUTE OF ENTRY:  EYE CONTACT  SKIN CONTACT  INHALATION  INGESTION

EYE CONTACT: May cause mild irritation, including stinging, watering and redness.  
 SKIN CONTACT: May cause mild irritation including redness and a burning sensation. Prolonged or repeated contact may cause dry skin. No information available on skin absorption.

INGESTION: Low to moderate degree of toxicity. LD50 (oral-rat) = 2.6 g/kg. Swallowing large amounts may cause irritation of the digestive tract including nausea, vomiting, diarrhea, abdominal cramping, irregular heartbeats, dehydration and hypertension. High dust levels may cause upper respiratory tract irritation.

INHALATION: No information available.  
 CARCINOGENICITY: No information available.  
 TERATOGENICITY: No information available.  
 REPRODUCTIVE TOXICITY: No information available.  
 MUTAGENICITY: No information available.  
 SYNERGISTIC PRODUCTS: No information available.

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**SECTION IV: FIRST AID MEASURES**

**SKIN CONTACT:** Flush with water. Dry area thoroughly and apply skin cream or moisturizing cream. If irritation persists, obtain medical attention.

**EYE CONTACT:** Flush with gently flowing warm water for 15 minutes, or until irritation ceases. Hold eyelids open to ensure thorough flushing. If irritation persists, obtain medical attention.

**INGESTION:** Do not induce vomiting unless directed to do so by medical personnel. If large amount swallowed, obtain medical attention.

**INHALATION:** Move to fresh air. Apply oxygen or artificial respiration if required. If breathing difficulties, or distress, continue obtain medical attention.

**SECTION V: PHYSICAL DATA**

**APPEARANCE AND ODOUR:** White to reddish-brown crystals; odourless

**SPECIFIC GRAVITY:** 1.986 – 1.990

**BOILING POINT (°C):** 1500 (sublimes)

**MELTING POINT (°C):** 773

**SOLUBILITY IN WATER:** 342 g/L @ 20°C      pH: 8-9 (5% sol'n)

**PERCENT VOLATILE BY VOLUME:** 0

**EVAPORATION RATE:** Not applicable

**VAPOUR PRESSURE (mmHg):** ~0

**VAPOUR DENSITY (air = 1):** 2.57

**BULK DENSITY:** Loose; 1025 – 1200 kg/m<sup>3</sup>

**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:** None known.

**HAZARDOUS COMBUSTION PRODUCTS:** No information available.

**SECTION VII: REACTIVITY DATA**

**STABILITY:**  STABLE       UNSTABLE

**INCOMPATIBILITY (CONDITIONS TO AVOID):** Avoid contact with hot nitric acid; may cause evolution of toxic nitrosyl chloride. Contact with other strong acids may produce hydrogen chloride gas. May react violently with bromine trifluoride and

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CONDITIONS OF REACTIVITY:

HAZARDOUS DECOMPOSITION PRODUCTS:

HAZARDOUS POLYMERIZATION:

may explode if mixed with potassium permanganate and sulfuric acid. Mildly corrosive to metals in the presence of moisture.

Contact with incompatible materials.

Hydrogen chloride and fumes of Na<sub>2</sub>O.

WILL NOT OCCUR

MAY OCCUR

**SECTION VIII: PREVENTIVE MEASURES**

**SPECIAL PROTECTION INFORMATION**

RESPIRATORY PROTECTION:

Use NIOSH approved dust mask, or respirator with dust/mist filters, if TLV is exceeded. 8 hour OEL Nuisance Dust Total Mass = 10mg/m<sup>3</sup>.

VENTILATION:

Suggest local exhaust ventilation, if TLV's are exceeded.

PROTECTIVE GLOVES:

Suggest cloth or leather work gloves be worn to prevent skin contact.

EYE PROTECTION:

Safety glasses with side shields or goggles recommended.

OTHER PROTECTIVE EQUIPMENT (SPECIFY):

Ensure eyewash station and emergency shower are available.

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

Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Store in a cool, dry well-ventilated place away from incompatibles. Keep bags or fiber drums dry at all times. Product is hygroscopic (may absorb moisture from the air when relative humidity >72%).

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

Potash is a crop nutrient and plant food, however large spills can harm or kill vegetation. Use appropriate safety equipment. Collect by sweeping and scoop up or shovel. Collect uncontaminated material for repackaging. Collect contaminated material in an approved container for disposal. Keep out of sewers, storm drains, surface waters and soils. Notify local, provincial and federal agencies as may be required.

**WASTE DISPOSAL METHOD**

Dispose in accordance with federal, provincial and local regulations. This product may be suitable for disposal in landfills; check with local operator. It is the responsibility of the end-user to determine if material meets the criteria of hazardous waste at the time of disposal. Dispose of all packaging in accordance with local regulations.



DOWN TO EARTH BUSINESS

+ MATERIAL SAFETY DATA SHEET +

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**SECTION IX: PREPARATION**

The information contains herein is given in good faith, but no warranty, expressed or implied, is made.

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BY: Regulatory Affairs  
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