



## CALCIUM NITRATE

### SECTION I: IDENTIFICATION OF PRODUCT

COMPANY: **Diversity Technologies Corp.** DATE: **June 7, 2016**  
**8750 – 53<sup>rd</sup> Ave.** PHONE: **780-440-4923**  
**Edmonton, AB T6E 5G2** FAX: **780-469-1899**

PRODUCT NAME: **CALCIUM NITRATE**  
 PRODUCT USE: Oilwell drilling fluid additive & oilwell cement additive  
 CHEMICAL FAMILY: Double salt of calcium nitrate and ammonium nitrate containing not more than 15.5% nitrogen and at least 12% water. CAS #: 6484-52-2 & 10124-37-5  
Ca(NO3)2-NH4NO3-10H2O

### WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

WHMIS CLASSIFICATION: Not a controlled product under WHMIS  
 WORKPLACE HAZARD: Not applicable

### TRANSPORTATION OF DANGEROUS GOODS (TDG)

PROPER SHIPPING NAME: Not TDG regulated  
 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
Hydrated ammonium and calcium nitrate	100	6484-52-2 & 10124-37-5	>2100 mg/kg	No information	Not listed

### SECTION III: HEALTH HAZARDS

ROUTE OF ENTRY:  EYE CONTACT  SKIN CONTACT  INHALATION  INGESTION  
 EYE CONTACT: May cause mild eye irritation.  
 SKIN CONTACT: May cause skin rash or sores particularly if skin is broken at point of contact.  
 INGESTION: Harmful if swallowed. No specific information available.  
 INHALATION: May cause mild nasal irritation.  
 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:	Remove contaminated clothing and brush away excess product. Flush with water for 15 minutes. If irritation develops and persists seek medical attention.
EYE CONTACT:	Immediately flush eyes with gently flowing warm water for at least 15 minutes. Get medical attention when flushing is completed.
INGESTION:	Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth if patient is unconscious person, rapidly losing consciousness or convulsing. Obtain immediate medical attention.
INHALATION:	Move victim to fresh air. Apply oxygen or artificial respiration as required. If breathing difficulties or distress continues, obtain medical attention.

**SECTION V: PHYSICAL DATA**

APPEARANCE AND ODOUR:	White to off-white granular solid; odourless
SPECIFIC GRAVITY:	1.12
BOILING POINT (°C):	Decomposes
MELTING POINT (°C):	116
SOLUBILITY IN WATER:	76% (w/w)      pH:              6-7 ( 5% solution)
PERCENT VOLATILE BY VOLUME:	Not available
EVAPORATION RATE:	Not available
VAPOUR PRESSURE (mmHg):	Not available
VAPOUR DENSITY (air = 1):	Not available
BULK DENSITY:	68 lb/ft <sup>3</sup>

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

FLASH POINT:	Not applicable
FLAMMABLE LIMITS:	Not applicable
EXTINGUISHING MEDIA:	Use water spray to cool fire exposed surface
SPECIAL FIRE FIGHTING PROCEDURES:	Self-contained breathing apparatus required for fire-fighting personnel.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	None known.
HAZARDOUS COMBUSTION PRODUCTS:	Nitrogen oxides.

**SECTION VII: REACTIVITY DATA**

STABILITY:	<input checked="" type="checkbox"/> STABLE <input type="checkbox"/> UNSTABLE
INCOMPATIBILITY (CONDITIONS TO AVOID):	In high pH (caustic) environments this material will release ammonia. Avoid high temperatures.

## CALCIUM NITRATE

CONDITIONS OF REACTIVITY: Not available  
HAZARDOUS DECOMPOSITION PRODUCTS: Ammonia when in contact with strong alkalis.  
HAZARDOUS POLYMERIZATION:  WILL NOT OCCUR  MAY OCCUR

### SECTION VIII: PREVENTIVE MEASURES

#### SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: In absence of adequate ventilation an approved dust mask should be worn. If TLV is exceeded wear an approved respirator with dust cartridges.

VENTILATION: Use local exhaust ventilation, process enclosure or other engineering controls as required to maintain level of airborne dust below TLV.

PROTECTIVE GLOVES: Suggest plastic or rubber.

EYE PROTECTION: Suggest safety glasses with side shields. Suggest chemical goggles be worn when preparing solutions.

OTHER PROTECTIVE EQUIPMENT (SPECIFY): Long sleeved shirt, trousers, safety shoes. Ensure emergency eye wash station and safety shower are available.

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

Wash thoroughly after handling, before eating, smoking and using the lavatory and at the end of the working period. Avoid contact with eyes and skin. Launder contaminated clothing before reuse. Store in a cool, dry place away from incompatibles. Keep container tightly closed when not in use. Containers, even those that have been emptied, will retain product residue; always obey hazard warnings and handle any empty containers as if full.

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

Wear appropriate protective equipment, including rubber boots, rubber gloves, rubber apron and chemical goggles. Sweep up and place in proper containers. Collect uncontaminated material for repackaging. Collect contaminated material in approved container for disposal. Wash spill area with water. Do not allow spilled material, or wash water, to enter storm sewers or public waterways.

#### 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.

### SECTION IX: PREPARATION

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

DATE ISSUED: June 7, 2016  
SUPERSEDES: June 5, 2013  
BY: Regulatory Affairs  
PHONE: 780-440-4923

