

**COMMANDER RESOURCES LTD.  
SUMMARY OF DRILL ADDITIVES (QUESTION 21)  
FOR THE STORM PROJECT**

**July 2012**

- Calcium Chloride
- Big Bear Rod Grease
- 550X Polymer
- Linseed Soap

\* Drilling additives supplied by West Coast Drilling Supplies. See attached information and MSDS sheets.



## PRODUCT INFORMATION

# CALCIUM CHLORIDE

94%-97% Anhydrous Calcium Chloride Mini-Pellets

**Description:**

Calcium Chloride 94%-97% ( $\text{CaCl}_2$ ) is a basic manufactured salt, which is hygroscopic and highly soluble in water.

**Physical and Chemical Data**

Appearance	white to off white
Specific Gravity	2.2
Solubility (20°C)	745 g/L
Melting Point	772°C
Min. % $\text{CaCl}_2$	94
Passing #10 Sieve	99
Passing #20 Sieve	80

**Application:**

Calcium Chloride (94%-97%) has a wide variety of oilfield uses. It is used as:

- a salinity source in oil mud
- a completion/workover fluid
- a packer fluid
- an accelerator for oilwell cement (up to 4% wt. cement)

**Handling:**

Calcium Chloride 94%-97% can be added directly through the hopper or predissolved in a chemical barrel or cement mix-water tank prior to use.

Use good industrial hygiene practice to avoid eye and excess skin contact. Wear a protective dust mask and goggles when handling and mixing.

Store in a cool, dry place and keep container tightly closed when not in use. Failure to store material properly may result in taking or wetness from atmospheric moisture.

**Packaging:**

25 kg plastic bags, palletized and plastic wrapped, 50 bags per pallet

NOTE: See disclaimer for  
supplier responsibility

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**MATERIAL SAFETY DATA SHEET****SECTION I: IDENTIFICATION OF PRODUCT**

COMPANY: **Diversity Technologies Corp.** DATE: **October 5, 2009**  
**8750 – 53<sup>rd</sup> Ave.** PHONE: 780-468-4064  
**Edmonton, AB T6E 5G2** FAX: 780-469-1899

PRODUCT NAME: **CALCIUM CHLORIDE 94-97 %**  
**(HT FINES; POWDER; HT POWDER; MINIPELLETS;**  
**PELADOW)**

PRODUCT USE: Oil well drilling fluid & cement additive  
CHEMICAL FAMILY: Inorganic calcium salt CAS#: 10043-52-4

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

WHMIS CLASSIFICATION: D2B  
WORKPLACE HAZARD: 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>
Calcium chloride	94-97	10043-52-4	1000 mg/kg	No information	Not established

**SECTION III: HEALTH HAZARDS**

ROUTE OF ENTRY: [XX]EYE CONTACT [XX]SKIN [XX]INHALATION [XX]INGESTION  
EYE CONTACT: Solid and concentrated liquid will cause moderate to severe eye irritation with corneal injury that may be slow to heal. When dissolving, the heat produced may cause more intense effects as well as thermal burns.  
SKIN CONTACT: Prolonged or repeated contact with the dust may irritate the skin or cause burns especially if skin is moist or if material is confined to skin.

INGESTION:	Oral toxicity considered low. Swallowing solids may cause gastrointestinal irritation or ulceration.
INHALATION:	Breathing dust may irritate the nose and throat and cause coughing and chest discomfort.
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 15 minutes. Obtain medical attention when flushing is complete.
SKIN CONTACT:	Wash affected area with soap and water. Remove contaminated clothing and shoes; wash before reuse. If irritation persists, or develops, obtain medical attention.
INGESTION:	Do not induce vomiting. Rinse mouth with water. Give 1-2 glasses of water to drink. If spontaneous vomiting occurs, keep head below hips to ensure vomitus is not aspirated, then rinse mouth and readminister water. Obtain medical attention. Never give anything by mouth to an unconscious or convulsing victim.
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 off-white powder, odourless
SPECIFIC GRAVITY:	2.2
BOILING POINT (°C):	1670
MELTING POINT (°C):	772 (approx)
SOLUBILITY IN WATER:	Very soluble pH: 8 – 9 (35% solution)
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 applicable
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**Diversity Technologies Corp. is the parent company of  
Canamara-United Supply, Hollimex Products, The Drilling Depot and  
Westcoast Drilling Supplies**

FLAMMABLE LIMITS:	Not applicable
EXTINGUISHING MEDIA:	Use media suitable for surrounding fire and packaging.
SPECIAL FIRE FIGHTING PROCEDURES:	Self-contained breathing apparatus required for fire fighting personnel.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Hydrogen chloride is a hazardous combustion product at temperatures in excess of 1600°C.

## SECTION VII: REACTIVITY DATA

STABILITY:	STABLE [XX]	UNSTABLE [ ]
INCOMPATIBILITY (CONDITIONS TO AVOID):	May react violently with processed lime to produce heat. Corrosive to some metals. Corrosive when wet. Flammable hydrogen may be generated from contact with metals such as zinc or sodium. Avoid contact with sulfuric acid. Heat is generated when mixed with water. Splattering or boiling may occur.	
CONDITIONS OF REACTIVITY:	Not available	
HAZARDOUS DECOMPOSITION PRODUCTS:	None	
HAZARDOUS POLYMERIZATION:	WILL NOT OCCUR [XX]	MAY OCCUR [ ]

## SECTION VIII: PREVENTATIVE MEASURES

### SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:	NIOSH/MESA approved dust mask or respirator if high dust levels expected.
VENTILATION:	Use local exhaust ventilation, process enclosure or other engineering controls to maintain dust level below TLV.
PROTECTIVE GLOVES:	Rubber gloves recommended.
EYE PROTECTION:	Chemical goggles recommended.
OTHER PROTECTIVE EQUIPMENT (Specify):	Full body covering recommended. Ensure eyewash and safety shower available.

## PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Wash thoroughly after handling. Avoid contact with eyes, skin, or clothing. Store in a cool, very dry place; material is hygroscopic. Keep container tightly closed when not in use. Heat developed during diluting or dissolving is very high. Use cool water when diluting or dissolving. Empty packaging contains residual hazardous material and should be stored and handled as if full.

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

Wear suitable protective equipment. Collect uncontaminated material for repacking. Collect contaminated material in an approved container for disposal. Wash residual material with copious amounts of water.

**WASTE DISPOSAL METHOD**

Dispose/landfill 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 containers contain residual chemical and must be disposed of or recycled 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:	October 6, 2009	BY:	Product Safety Committee
SUPERSEDES:	October 31, 2006	PHONE:	780-440-4923



## PRODUCT INFORMATION

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# BIG BEAR ROD GREASE

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Specially thickened extreme pressure grease with additives that provide corrosion, wear and oxidation resistance. Tackiness assures adherence to drill rods while providing superior resistance to water washing and centrifugal separation. It possesses the right degree of fibrous characteristics to permit easy smearing of the drill rods by hand. As the rods are lowered into the drill hole, an adhesive film is formed on the rods that is resistant to the washing action of the water and "sludge" containing rock cuttings. This film of grease is a durable one that will prevent momentary seizure and chattering of the rods or binding in the hole. The frequency of pulling the rods for greasing is reduced and increased drilling costs are avoided.

**Typical Properties:**

Colour:	brownish yellow
Texture:	long fibre
Penetration:	ASTM
Worked at 25° C	212
Dropping point, ° C	252
Dropping point, ° F	485
Viscosity, cSt at 40° C (104° F)	84.6
cSt at 100° C (212° F)	7.8
SUS at 40° C (104° F)	392
SUS at 100° C (212° F)	52
Pour point, ° C	-27
Pour point, ° F	-15

**Recommended Uses:**

BIG BEAR ROD GREASE is recommended for grease lubrication on diamond drill rods whether operating on the surface or underground.

**Packaging:**

17 kg pail

NOTE: See disclaimer for  
supplier responsibility

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# MATERIAL SAFETY DATA SHEET

## SECTION I: IDENTIFICATION OF PRODUCT

COMPANY: **Diversity Technologies Corp.** DATE: **Nov. 22, 2011**  
**8750 – 53<sup>rd</sup> Ave.** PHONE: 780-440-4923  
**Edmonton, AB T6E 5G2** FAX: 780-469-1899

PRODUCT NAME: **BIG BEAR ROD GREASE**

PRODUCT USE: Anti-seize compound  
CHEMICAL FAMILY: Mixture CAS #: Mixture

## WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

WHMIS CLASSIFICATION: Not WHMIS regulated.  
WORKPLACE HAZARD: Not hazardous under normal conditions of use.

## 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

<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>
Mineral oil	70-80	64742-52-5	Not available	Not available	Not available
Barium soap	20-30	68201-19-4	Not available	Not available	Not available

## SECTION III: HEALTH HAZARDS

ROUTE OF ENTRY: [XX] EYE CONTACT [XX] SKIN [ ] INHALATION [XX] INGESTION  
EYE CONTACT: May cause slight transient irritation.  
SKIN CONTACT: May cause slight transient irritation.  
INGESTION: No effects known.  
INHALATION: Not a likely source of contact during normal use.  
CARCINOGENICTY: None of the ingredients in the compound are listed by NTP, IARC or OSHA as being carcinogenic.  
TERATOGENICITY: No information available.



REPRODUCTIVE TOXICITY: No information available.  
MUTAGENICTY: No ingredients listed as mutagenic.  
SYNERGISTIC PRODUCTS: No information available.

#### SECTION IV: FIRST AID MEASURES

SKIN CONTACT: Remove by wiping, or with a waterless hand cleaner. Wash with soap and water. Remove and launder contaminated clothing before re-use.  
EYE CONTACT: Immediately flush with gently flowing warm water until all residual material is removed. Remove contact lenses if present. Hold eyelids open to ensure thorough flushing. If irritation persists, obtain medical attention.  
INGESTION: Do not induce vomiting. Rinse mouth. Obtain immediate medical attention. 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 continues, obtain medical attention.

#### SECTION V: PHYSICAL DATA

APPEARANCE AND ODOUR:	Brown paste; bland odour	
SPECIFIC GRAVITY:	0.90 @ 16°C	
BOILING POINT (°C):	371	
MELTING POINT (°C):	204	
SOLUBILITY IN WATER:	Insoluble	pH: Not available
PERCENT VOLATILE BY VOLUME:	Not available	
EVAPORATION RATE:	Not available	
VAPOUR PRESSURE :	Not available	
VAPOUR DENSITY (air = 1):	Not available	
BULK DENSITY:	Not applicable	

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

FLASH POINT:	188°C (D-92)
FLAMMABLE LIMITS:	Not available
EXTINGUISHING MEDIA:	Dry chemical, CO <sub>2</sub> , foam or water spray.
SPECIAL FIRE FIGHTING PROCEDURES:	Self-contained breathing apparatus required for fire fighting personnel. Remove containers from fire area, or cool with water spray, if possible.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	This product may burn under fire conditions.

**SECTION VII: REACTIVITY DATA**

STABILITY:	STABLE [XX]	UNSTABLE [ ]
INCOMPATIBILITY (CONDITIONS TO AVOID):	Strong oxidizers. Avoid heat, sparks and open flames.	
CONDITIONS OF REACTIVITY:	Contact with incompatibles or ignition sources.	
HAZARDOUS DECOMPOSITION PRODUCTS:	May release CO <sub>x</sub> , smoke and irritating vapours when heated to decomposition.	
HAZARDOUS POLYMERIZATION:	WILL NOT OCCUR [XX]	MAY OCCUR [ ]

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

RESPIRATORY PROTECTION:	Not required under normal conditions of use.
VENTILATION:	Not required under normal conditions of use.
PROTECTIVE GLOVES:	Suggest neoprene or viton.
EYE PROTECTION:	Safety glasses with side-shields if required.
OTHER PROTECTIVE EQUIPMENT (Specify):	Protective clothing as required to prevent contact. Ensure eyewash station and emergency shower are available.

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

Avoid contact with skin and eyes. Avoid ingestion. Wash thoroughly before eating, drinking or smoking. Store in cool, dry area away from incompatibles and sources of ignition. Use caution when opening unvented containers. Use in well ventilated area. Store unused material in original container.

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

Use appropriate safety equipment. Eliminate ignition sources. Scoop up excess, then wipe down the affected area and pick up residual with diatomaceous earth to prevent slipping hazard. Place contaminated material and clean up materials in approved containers for disposal.

**WASTE DISPOSAL METHOD**

Dispose/incinerate 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. Dispose of, or recycle, empty containers 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:	Nov. 22, 2011	BY:	Product safety committee
SUPERSEDES:	Dec. 9, 2008	PHONE:	780-440-4923



## PRODUCT INFORMATION

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### 550X POLYMER

NSF Standard 60 Approved

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<b>Description:</b>	Composition of product: Concentration, granular copolymer of sodium acrylamides/acrylates.
<b>Principal Uses:</b>	<p>By introducing 550X to appropriate drilling operations, the following practical advantages can be expected:</p> <ul style="list-style-type: none"><li>• 100% recovery of organic formations</li><li>• Excellent stability of walls or holes</li><li>• Diameter of hole practically identical to diameter of tool</li><li>• No problem with removal of casing</li><li>• Torque lessened by 20 - 30%</li><li>• Faster penetration rate</li><li>• Reduction in control and mud-production equipment</li><li>• Reduction in wear on tubular material</li><li>• Reduction in storage on site, volume of supplies and transport costs</li><li>• Reduction in water consumption</li><li>• Important time saving (drilling, maintenance, etc.)</li></ul>
<b>Mixing:</b>	550X can be mixed readily with fresh water. Sprinkle slowly onto agitated, turbulent water. Hydration is almost immediate. Depending on water flow, approximately 1 m <sup>3</sup> of mud can be mixed in 5 minutes. This mud is then ready for use.
<b>Environment:</b>	<p>Dangerous components: None Potentially dangerous impurities: None Physical properties: White solid at 20 Degrees C Measures to be taken after leakage or accidental spilling: Wash abundantly with water and bleach Inflammability or danger of explosion: None Poisonous properties: Non-toxic, slightly basic First Aid measures: Wash with water</p>
<b>Packaging:</b>	20 kg. High impact plastic pail with handle, .5 kg tubs - 20 per box, 1 kg plastic bags - 20 per box

NOTE: See disclaimer for  
supplier responsibility

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# MATERIAL SAFETY DATA SHEET

## SECTION I: IDENTIFICATION OF PRODUCT

COMPANY: **Diversity Technologies Corp.** DATE: **Nov. 22, 2011**  
**8750 – 53<sup>rd</sup> Ave.** PHONE: 780-468-4064  
**Edmonton, AB T6E 5G2** FAX: 780-469-1899

PRODUCT NAME: **550X POLYMER**

PRODUCT USE: Drilling mud additive.  
CHEMICAL FAMILY: Anionic water soluble polymer CAS#: Not available

## WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

WHMIS CLASSIFICATION: Not a controlled product under WHMIS  
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>PERCENT</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>
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Contains no WHMIS controlled ingredients.

## SECTION III: HEALTH HAZARDS

ROUTE OF ENTRY: [ ] EYE CONTACT [ ] SKIN [ ] INHALATION [ ] INGESTION  
EYE CONTACT: May cause slight irritation and/or redness.  
SKIN CONTACT: May cause slight irritation some cases.  
INGESTION: No effects expected.  
INHALATION: May cause irritation of the respiratory tract, including sneezing and coughing.  
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:** Wash thoroughly with soap and water. If irritation develops or persists, obtain medical attention.

**EYE CONTACT:** Flush with gently flowing warm water until irritation subsides. If irritation persists, obtain medical attention.

**INGESTION:** This product is not considered toxic based on studies on lab animals. Do not induce vomiting. Give 2-3 glasses of water. If symptoms occur, obtain medical attention.

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

**SECTION V: PHYSICAL DATA**

<b>APPEARANCE AND ODOUR:</b>	White granular powder; no odour
<b>SPECIFIC GRAVITY:</b>	Not available
<b>BOILING POINT (°C):</b>	Not available
<b>MELTING POINT (°C):</b>	Not available
<b>SOLUBILITY IN WATER:</b>	Soluble
<b>PERCENT VOLATILE BY VOLUME:</b>	Not available
<b>EVAPORATION RATE:</b>	Not available
<b>VAPOUR PRESSURE (mmHg):</b>	Not available
<b>VAPOUR DENSITY (air = 1):</b>	Not available
<b>BULK DENSITY:</b>	0.8 g/cc

pH: 6 - 8 (@ 0.5% aq. sol'n)

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

**FLASH POINT:** Not applicable

**FLAMMABLE LIMITS:** Not applicable

**EXTINGUISHING MEDIA:** Carbon dioxide, dry chemical, foam, in preference to a water spray.

**SPECIAL FIRE FIGHTING PROCEDURES:** Self contained breathing apparatus required for fire fighting personnel. Move containers from fire area if possible.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** As with most organic powders, flammable dust clouds may be formed in air. Avoid creating dust. Avoid sources of ignition. Product is extremely slippery when wet.

**SECTION VII: REACTIVITY DATA**

STABILITY:	STABLE [XX]	UNSTABLE [ ]
INCOMPATIBILITY (CONDITIONS TO AVOID):	Avoid contact with strong oxidizers. Avoid wet, damp or humid conditions, extremes of temperature, and ignition sources.	
HAZARDOUS DECOMPOSITION PRODUCTS:	Oxides of carbon and nitrogen, various hydrocarbons, and/or ammonia upon combustion	
HAZARDOUS POLYMERIZATION:	WILL NOT OCCUR [XX]	MAY OCCUR [ ]

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

RESPIRATORY PROTECTION:	Use approved dust mask in absence of adequate ventilation. Use approved respirators with dust cartridges if TLV is exceeded.
VENTILATION:	Use in well-ventilated area, or use local exhaust ventilation, process enclosure or other engineering controls to maintain dust level below TLV.
PROTECTIVE GLOVES:	Use gloves, if needed, to avoid prolonged or repeated skin contact.
EYE PROTECTION:	Use safety glasses or goggles.
OTHER PROTECTIVE EQUIPMENT (Specify):	As necessary to prevent contact. Ensure eyewash station and emergency shower are available.

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

Avoid prolonged or repeated breathing of dust and contact with skin. Remove contaminated clothing; launder or dry-clean before reuse. Cleanse skin thoroughly after contact, before breaks and meals and at end of work period. Product is readily removed from skin by washing thoroughly with soap and water. Store in a cool, dry location away from incompatibles. Store in original container.

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

Use appropriate safety equipment. Sweep up dry material and flush spill area with water. Collect uncontaminated material for repackaging. Collect contaminated material in approved containers for disposal. Scrub spill area with dry absorbent and then flush residue with water to eliminate slip hazard. Absorb spills of dilute solutions with inert absorbent. Collect in approved containers for disposal. The product or its solutions should not be allowed to enter waterways without treatment. Spilled solutions can create a hazard because of their slippery nature.

### **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. It may be possible to dispose of spills of non-hazardous materials in a landfill; check with local operator.

### **SECTION IX: PREPARATION**

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

DATE ISSUED: Nov. 22, 2011  
SUPERSEDES: Dec. 19, 2008

BY: Product safety committee  
PHONE: 780-440-4923





## PRODUCT INFORMATION

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# LINSEED SOAP

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<b>Description:</b>	LINSEED SOAP is a lubricating grease made from a mixture of linseed oil, fatty soaps and surfactants. It is a semi-solid paste, brown in colour.
<b>Application:</b>	LINSEED SOAP can be swabbed inside inner tubes, added to drill fluid through a suction hose applicator or flushed into holding tanks with a water spray. Immediate results will occur by increased core recovery and increased bit footage.
<b>WHMIS:</b>	This product is not a WHMIS controlled substance.
<b>TDG:</b>	This product is not regulated under TOG.
<b>Packaging:</b>	23 kg recyclable plastic pails.

NOTE: See disclaimer for  
supplier responsibility

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# MATERIAL SAFETY DATA SHEET

## SECTION I: IDENTIFICATION OF PRODUCT

COMPANY: **Diversity Technologies Corp.** DATE: **Nov. 22, 2011**  
**8750-53 Ave.** PHONE: 780-468-4064  
**Edmonton, AB T6E 5G2** FAX: 780-469-1899

PRODUCT NAME: **LINSEED SOAP**

PRODUCT USE: Lubricant.  
CHEMICAL FAMILY: Not available CAS#: Not available

## WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

WHMIS CLASSIFICATION: Not WHMIS controlled.  
WORKPLACE HAZARD: Not applicable

## 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>PERCENT</u>	<u>CAS NUMBER</u>	<u>LD<sub>50</sub> Oral-Rat</u>	<u>LC<sub>50</sub> Inhal-Mouse</u>	<u>ACGIH-TLV</u>
No hazardous ingredients available.					

## SECTION III: HEALTH HAZARDS

ROUTE OF ENTRY: ☐ EYE CONTACT ☐ SKIN ☐ INHALATION ☐ INGESTION  
EYE CONTACT: May cause slight irritation.  
SKIN CONTACT: May cause slight irritation.  
INGESTION: No information available. Not considered toxic based on information available for similar materials.  
INHALATION: Not a likely source of contact during normal use.  
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:** Wipe away excess. Remove contaminated clothing and wash affected area thoroughly with soap and water. If irritation develops or persists, obtain medical attention.

**EYE CONTACT:** Immediately flush with gently flowing warm water until material is removed and irritation ceases. If irritation persists, obtain medical attention.

**INGESTION:** If conscious give 1 to 2 glasses of water and induce vomiting; keep head below hips to prevent aspiration of vomitus. 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, continue obtain medical attention.

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

<b>APPEARANCE AND ODOUR:</b>	Brown paste; slight soapy odour	
<b>SPECIFIC GRAVITY:</b>	Not applicable	
<b>BOILING POINT (°C):</b>	100	
<b>MELTING POINT (°C):</b>	0	
<b>SOLUBILITY IN WATER:</b>	Soluble	pH: 9.5 – 11.5
<b>PERCENT VOLATILE BY VOLUME:</b>	Not applicable	
<b>EVAPORATION RATE:</b>	Not applicable	
<b>VAPOUR PRESSURE (mmHg):</b>	Not applicable	
<b>VAPOUR DENSITY (air = 1):</b>	Not applicable	
<b>BULK DENSITY</b>	Not applicable	

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

<b>FLASH POINT:</b>	Not flammable
<b>FLAMMABLE LIMITS:</b>	Not applicable
<b>EXTINGUISHING MEDIA:</b>	Use media suitable for packaging and surrounding materials.
<b>SPECIAL FIRE FIGHTING PROCEDURES:</b>	Self-contained breathing apparatus required for fire fighting personnel.
<b>UNUSUAL FIRE AND EXPLOSION HAZARDS:</b>	None known.

**SECTION VII: REACTIVITY DATA**

STABILITY:	STABLE [XX]	UNSTABLE [ ]
INCOMPATIBILITY (CONDITIONS TO AVOID):	None known.	
CONDITIONS OF REACTIVITY:	None known.	
HAZARDOUS DECOMPOSITION PRODUCTS:	Not determined.	
HAZARDOUS POLYMERIZATION:	WILL NOT OCCUR [XX]	MAY OCCUR [ ]

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

RESPIRATORY PROTECTION:	Not applicable.
VENTILATION:	Not applicable.
PROTECTIVE GLOVES:	Personal preference.
EYE PROTECTION:	Safety glasses with side-shields recommended.
OTHER PROTECTIVE EQUIPMENT (Specify):	Wear clothing adequate to protect against exposure. Ensure eye-wash station and emergency shower are available.

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

Wash thoroughly after handling. Avoid contact with eyes, skin or clothing. Launder contaminated clothing before reuse. No specific storage requirements.

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

Use appropriate safety equipment. Scoop up excess material. Collect uncontaminated material for repackaging. Collect contaminated material in approved containers for disposal. Wipe up remaining spill with absorbent compound to prevent slipping hazard.

**WASTE DISPOSAL METHOD**

Dispose in accordance with federal, provincial and local regulations. This material can be landfilled in most areas; 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.

**SECTION IX: PREPARATION**

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

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