



## SODA ASH

### SECTION I: IDENTIFICATION OF PRODUCT

COMPANY: **Diversity Technologies Corp.** DATE: **February 4, 2016**  
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PRODUCT NAME: **SODA ASH**

PRODUCT USE: Oilwell drilling fluid and cement additive.  
 CHEMICAL FAMILY: Inorganic sodium salt CAS #: 497-19-8

### WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

WHMIS CLASSIFICATION: D2B, E  
 WORKPLACE HAZARD: Eye irritant; corrosive to aluminum

### 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
Sodium carbonate	99.8	497-19-8	2800 mg/kg	2.3mg/L/2hr	Not established

### SECTION III: HEALTH HAZARDS

ROUTE OF ENTRY:  EYE CONTACT  SKIN CONTACT  INHALATION  INGESTION

EYE CONTACT: Dust and concentrated solutions may cause moderate to severe eye irritation.

SKIN CONTACT: Non-irritating to intact skin. Minor irritation may occur on abraded skin. Prolonged contact may cause irritation (red, dry, cracked skin).  
**LD50 Dermal > 2000 mg/kg (rabbit).**

INGESTION: Although low in toxicity, ingestion can be harmful. May cause nausea, vomiting, stomachache and diarrhea.

INHALATION: Excessive levels of airborne dust may irritate the mucous membranes and upper respiratory tract.

CARCINOGENICITY: Not listed by NTP, IARC, OSHA or ACGIH.  
 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:	Remove contaminated clothing and wash thoroughly with water and soap. If irritation occurs and persists, obtain medical attention.
EYE CONTACT:	Immediately flush eyes with gently flowing warm water for 15 minutes or until irritation ceases, lifting the upper and lower eyelids occasionally. When flushing period is complete, obtain medical attention.
INGESTION:	Do not induce vomiting. Rinse mouth with water. Give one to two glasses of water dilute. Obtain medical attention immediately. Never give anything by mouth if victim is unconscious, rapidly losing consciousness or convulsing.
INHALATION:	Move to fresh air. Apply oxygen or artificial respiration if required. If breathing difficulties or distress continues, obtain medical attention.

## SECTION V: PHYSICAL DATA

APPEARANCE AND ODOUR:	White granular solid; odourless
SPECIFIC GRAVITY:	2.52
BOILING POINT (°C):	Decomposes
MELTING POINT (°C):	851
SOLUBILITY IN WATER:	33.2% maximum      pH: 11.4 (1% solution)
PERCENT VOLATILE BY VOLUME:	Not applicable
EVAPORATION RATE:	Not applicable
VAPOUR PRESSURE (mmHg):	Not applicable
VAPOUR DENSITY (air = 1):	Not applicable
BULK DENSITY:	0.86 – 1.12 g/mL

## SECTION VI: FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:	Not combustible
FLAMMABLE LIMITS:	Not applicable
EXTINGUISHING MEDIA:	Use media appropriate for packaging and surrounding materials.
SPECIAL FIRE FIGHTING PROCEDURES:	Self-contained breathing apparatus required for fire-fighting personnel.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	None known.
HAZARDOUS COMBUSTION PRODUCTS:	Fumes of sodium oxide. Oxides of carbon.

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## SECTION VII: REACTIVITY DATA

STABILITY:	<input checked="" type="checkbox"/> STABLE	<input type="checkbox"/> UNSTABLE
INCOMPATIBILITY (CONDITIONS TO AVOID):	Contact with acids will release carbon dioxide gas. Can react violently with red, hot aluminum metal; fluorine gas; lithium; and 2,4,6-trinitrotoluene. Sodium carbonate solutions (concentrations up to 35%) are corrosive to aluminum, lead, and zinc and zinc brasses at 21 deg C. Solid sodium carbonate is corrosive to aluminum at 100% relative humidity and normal temperatures.	
CONDITIONS OF REACTIVITY:	Not available.	
HAZARDOUS DECOMPOSITION PRODUCTS:	Heating to decomposition, it emits fumes of sodium oxide.	
HAZARDOUS POLYMERIZATION:	<input checked="" type="checkbox"/> WILL NOT OCCUR	<input type="checkbox"/> MAY OCCUR

## SECTION VIII: PREVENTIVE MEASURES

### SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:	NIOSH/MESA approved dust mask recommended for low levels of dust. Use approved respirator with dust cartridges if dust concentration in air exceeds TLV.
VENTILATION:	Local exhaust recommended if concentration of dust exceeds TLV (nuisance dust = 15 mg/m <sup>3</sup> ).
PROTECTIVE GLOVES:	Suggest plastic or rubber.
EYE PROTECTION:	Safety glasses or goggles. Do not wear contact lenses when handling this material.
OTHER PROTECTIVE EQUIPMENT (SPECIFY):	Protective clothing as required to prevent contact. Ensure eye wash station and emergency shower are available.

### PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Avoid contact with eyes or prolonged skin contact. Avoid breathing dust. Use good personal hygiene and housekeeping. Launder contaminated clothing before reuse. Store in a cool, dry, well-ventilated place away from acids. Product is hygroscopic, prolonged storage may cause product to cake and become wet from atmospheric moisture. Obey hazard warnings and handle empty containers as if they were full.

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

Wear appropriate safety gear including eye and respiratory protection. Clean spill by sweeping up and shoveling into containers. Collect uncontaminated material for repackaging. Collect contaminated material in an approved container for disposal. Cautiously spray residue with plenty of water. Collect wash water in an approved container for disposal.

## WASTE DISPOSAL METHOD

Dispose in accordance with federal, provincial and local regulations. If permitted by applicable disposal regulations, bury in a solid waste landfill or dissolve and neutralize as follows: Dissolve in water using caution as solution can get hot. Neutralize with acid and flush to sewer with plenty of water. Good ventilation is required during neutralization due to release of CO<sub>2</sub> gas. Neutralized wastes may have to be disposed of by an approved contractor. 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, which have not been cleaned and purged, contain residual hazardous material and must be disposed of, or recycled, in accordance with local regulations.

## SECTION IX: PREPARATION

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

DATE ISSUED: **February 4, 2016**  
SUPERSEDES: **February 5, 2013**  
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