

# MATERIAL SAFETY DATA SHEET

## SECTION I: IDENTIFICATION OF PRODUCT

COMPANY: **Diversity Technologies Corp.** DATE: **June 29, 2009**  
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PRODUCT NAME: **Sodium Hypochlorite 12%**  
**BLEACH (GUARDSMAN 12)**

PRODUCT USE: Bactericide  
CHEMICAL FAMILY: Hypochlorite solution CAS #: 7681-52-9

## WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

WHMIS CLASSIFICATION: E  
WORKPLACE HAZARD: Corrosive liquid

## TRANSPORTATION OF DANGEROUS GOODS (TDG)

PROPER SHIPPING NAME: HYPOCHLORITE SOLUTIONS  
TDG CLASSIFICATION: 8  
UN NUMBER (PIN): UN1791  
PACKING GROUP: III

## 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>
Sodium hypochlorite	7-13	7681-52-9	8910 mg/kg	>10,000 mg/m <sup>3</sup>	Not established

## SECTION III: HEALTH HAZARDS

ROUTE OF ENTRY:  EYE CONTACT  SKIN  INHALATION  INGESTION  
EYE CONTACT: Causes severe irritation of the mucous membranes. May cause severe eye damage.  
SKIN CONTACT: Causes severe irritation with blistering and ulceration.  
INGESTION: Causes burning of the mouth and throat, abdominal cramps, nausea, vomiting diarrhea, shock. May lead to convulsions, coma and even death.  
INHALATION: Causes irritation of the nose and throat. Causes coughing, difficulty breathing and pulmonary edema.

CARCINOGENICITY: Not carcinogenic based on current evidence.  
TERATOGENICITY: Not teratogenic based on current evidence.  
REPRODUCTIVE TOXICITY: Not a reproductive toxin based on current evidence.  
MUTAGENICITY: Not mutagenic based on current evidence.  
SYNERGISTIC PRODUCTS: No information available.

#### SECTION IV: FIRST AID MEASURES

SKIN CONTACT: Flush contacted area with copious quantities of water while removing contaminated clothing. Seek medical attention if irritation persists. Launder contaminated clothing before re-use.  
EYE CONTACT: Immediately flush with warm running water for minimum 20 minutes. Hold eyelids open to ensure thorough flushing. Obtain medical attention when entire flushing period is completed.  
INGESTION: Do not induce vomiting. Rinse mouth. Immediately dilute by drinking large quantities of water. Seek immediate medical attention. Never give anything by mouth if patient is unconscious, rapidly losing consciousness or convulsing.  
INHALATION: Move to fresh air to relieve symptoms. Give oxygen or artificial respiration if required. Obtain medical attention.

#### SECTION V: PHYSICAL DATA

APPEARANCE AND ODOUR: Clear greenish-yellow solution; strong chlorine odour.  
SPECIFIC GRAVITY: 1.17 @ 20°C  
BOILING POINT (°C): Not available.  
MELTING POINT (°C): ~ -15  
SOLUBILITY IN WATER: Miscible pH: <12  
PERCENT VOLATILE BY VOLUME: Not available  
EVAPORATION RATE: Not available  
VAPOUR PRESSURE (mmHg): 12.1 @ 20°C  
VAPOUR DENSITY (air = 1): Not available  
BULK DENSITY: Not applicable

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

FLASH POINT: Not flammable  
FLAMMABLE LIMITS: Not applicable  
EXTINGUISHING MEDIA: Use media suitable for surrounding fire.

**SPECIAL FIRE FIGHTING  
PROCEDURES:  
UNUSUAL FIRE AND  
EXPLOSION HAZARDS:**

Self-contained breathing apparatus required for fire fighting personnel.  
Decomposition may produce poisonous vapours (chlorine and hydrogen chloride). **DO NOT** use dry chemical fire extinguishing agents containing ammonium compounds (such as some A:B:C agents), since an explosive compound can be formed.

### SECTION VII: REACTIVITY DATA

<b>STABILITY:</b>	STABLE [ ]	UNSTABLE [XX]
<b>INCOMPATIBILITY (CONDITIONS TO AVOID):</b>	Unstable at temperatures above 40°C, in sunlight and in contact with acid. Incompatible with strong acids, ammonia, oxidizable materials, nickel, copper, tin and iron.	
<b>CONDITIONS OF REACTIVITY:</b>	Elevated temperatures and contact with incompatible materials.	
<b>HAZARDOUS DECOMPOSITION PRODUCTS:</b>	Chlorine (by reaction with acids), oxygen (by reaction with nickel, copper, tin, manganese, iron) sodium chloride, sodium chlorate with increased temperature. Solutions decompose when exposed to sunlight, giving off oxygen gas. However, the amount of oxygen produced is not sufficient to support combustion.	
<b>HAZARDOUS POLYMERIZATION:</b>	WILL NOT OCCUR [XX]	MAY OCCUR [ ]

### SECTION VIII: PREVENTATIVE MEASURES

#### SPECIAL PROTECTION INFORMATION

<b>RESPIRATORY PROTECTION:</b>	An approved respirator with cartridges suitable for chlorine is recommended.
<b>VENTILATION:</b>	Use process enclosure, local exhaust ventilation or other engineering controls to reduce level of vapours in the air.
<b>PROTECTIVE GLOVES:</b>	Rubber gloves recommended.
<b>EYE PROTECTION:</b>	Chemical goggles
<b>OTHER PROTECTIVE EQUIPMENT (Specify):</b>	As appropriate to prevent contact with body. Ensure eyewash station and emergency shower are available.

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

Use proper equipment for lifting and transporting all containers. This product is a corrosive liquid. Use approved PPE when handling. Use good industrial hygiene and housekeeping methods. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure. **Laundry contaminated clothing before reuse. Thoroughly clean, or discard, contaminated leather goods (belts, footwear, gloves).** Store in a cool, dry, well-ventilated area, out of direct sunlight and away from heat sources. Keep container tightly closed, and away from incompatible materials. Venting of containers is advisable. Empty packaging contains small amounts of hazardous material and must be handled and stored as if full.

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

Use appropriate safety equipment. Ventilate area. Only enter area with PPE. Stop leak if possible to do so without risk. Dike to prevent spread of material. Pick up large spills by vacuum. Soak up small spills with inert absorbent material. Collect product and contaminated absorbent in approved containers for disposal. Wash spill area with water. Notify the appropriate government agencies as required.

## **WASTE DISPOSAL METHOD**

Dispose in accordance with all 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 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.

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BY: Product safety committee

SUPERSEDES: **June 29, 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.**