



# GREAT NORTH CHEMICALS INC.

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## Material Safety Data Sheet

### Sodium Hypochlorite 12%

#### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Sodium Hypochlorite 12%

**Synonyms:** Sodium oxychloride; Soda bleach liquor; Javel water; Clorox; Javex.

**Chemical Family:** Hydrochlorous acid, sodium salt.

**Application:** Chemical intermediate. Laboratory reagent. Water treatment. Pulp and paper. Bleaching agent. Disinfectant.

**Distributed By:**

Great North Chemicals  
85 Malmo Court  
Maople, Ontario  
L6A 1R4

**Prepared By:** Tony Roehrig

**Preparation date of MSDS:** January 2014

**Telephone number of preparer:** 1-905-832-2276

**24-Hour Emergency Telephone Number (CANUTEC):** (613) 996-6666

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Percentage (W/W)	LD50s and LC50s Route & Species:
Water 7732-18-5	Balance	Oral LD50 (Rat) >90 mL/kg
Sodium Hypochlorite, Solution 7681-52-9	12-14	Oral LD50 (Rat) = 8200 mg/kg Dermal LD50 (Rabbit) > 10000 mg/kg

**Note:** Drug Identification Number (DIN) - 02265729

#### 3. HAZARDS IDENTIFICATION

**Potential Acute Health Effects:**

**Eye Contact:** Corrosive to eye tissue and may cause severe damage and blindness.

**Skin Contact:** Corrosive. May cause severe skin irritation. Prolonged contact may lead to burns and blisters and may aggravate dermatitis. May cause whitening or bleaching of the skin.

**Inhalation:** Corrosive to the respiratory passage. Causes irritation of the mouth, nose and throat. Repeated and/or prolonged exposures may cause productive cough, running nose, bronchopneumonia, pulmonary edema (fluid build-up in lungs) and reduction of pulmonary function. If mixed with acids or warmed to temperatures greater than 40 degrees Celsius, Sodium hypochlorite solutions release chlorine gas. This gas can cause severe irritation of the nose and throat. Exposures to high levels of chlorine gas may result in severe lung damage.

### 3. HAZARDS IDENTIFICATION

**Ingestion:** Corrosive. Causes burns to the mouth, throat and stomach. Causes vomiting, nausea, and diarrhea. Coma, shock and death may occur.

### 4. FIRST AID MEASURES

**Eye Contact:** Wash eyes with water for a minimum of 30 minutes or until no evidence of the chemical remains. Hold eyelids open during flushing. Seek immediate medical attention.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 30 minutes. Get medical attention.

**Inhalation:** Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.

**Ingestion:** Rinse mouth with water. Do not induce vomiting. Do not give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Seek immediate medical attention.

**Notes to Physician:** Due to the severely irritating or corrosive nature of the material, swallowing may lead to ulceration and inflammation of the upper alimentary tract with hemorrhage and fluid loss. Also, perforation of the esophagus or stomach may occur, leading to mediastinitis or peritonitis and the resultant complications.

### 5. FIRE FIGHTING MEASURES

**Flash Point:** None.

**Flash Point Method:** Not applicable.

**Autoignition Temperature:** Not available.

**Flammable Limits in Air (%):** Not Available.

**Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

**Special Exposure Hazards:** Keep containers cool to prevent rupture and release of material. Closed containers may explode in fire. Spilled material may cause floors and contact surfaces to become slippery.

**Hazardous Decomposition/Combustion Materials (under fire conditions):** Chlorine. Oxygen. Oxides of sodium.

**Special Protective Equipment:** Fire fighters should wear full protective clothing, including self-contained breathing equipment.

**NFPA RATINGS FOR THIS PRODUCT ARE:** Not Available.

**HMIS RATINGS FOR THIS PRODUCT ARE:** Not Available.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautionary Measures:** Wear appropriate protective equipment.

**Environmental Precautionary Measures:** Prevent entry into sewers or streams, dike if needed. Consult local authorities.

**Procedure for Clean Up:** Ventilate area. Small spills: soak up with absorbent material and scoop into containers. Large spills: prevent contamination of waterways. Dike and pump into suitable containers. Clean up residual with absorbent material, place in appropriate container and flush with water. Spilled material may cause floors and contact surfaces to become slippery.

### 7. HANDLING AND STORAGE

**Handling:** For industrial use only. Handle and open containers with care. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid inhalation of chemical. Empty containers may contain hazardous product residues. Keep the containers closed when not in use. Protect against physical damage. Use appropriate personnel protective equipment. When diluting, add this product to water in small amounts to avoid spattering. Never add water to this material.

**Storage:** Store in a cool, dry, well ventilated area, away from heat and ignition sources. Store below 29 °C. Do not freeze. Keep away from direct sunlight. Store away from organic chemicals, strong bases, metal powders, carbides, sulfides, and any readily oxidizable material. Storage area should be equipped with corrosion-resistant floors, sumps and should have controlled drainage to a recovery tank. Store in a sealed polyethylene lined container.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Engineering Controls:

Local exhaust ventilation as necessary to maintain exposures to within applicable limits. Make up air should always be supplied to balance air exhausted (either generally or locally). Ventilation required when spraying or applying in a confined area. Ventilation should be explosion proof. Eliminate ignition sources.

**Respiratory Protection:** Wear a Niosh approved full facepiece respirator for acid gases or a self-contained breathing apparatus for air concentration levels up to 5 ppm. NIOSH approved supplied air respirator when airborne concentrations exceed exposure limits.

### Gloves:

Impervious gloves. Neoprene gloves. Nitrile gloves. Rubber gloves.

**Skin Protection:** Neoprene coated apron or chemical resistant clothing. Impervious boots.

**Eyes:** Chemical safety goggles and/or full face shield to protect eyes and face, if product is handled such that it could be splashed into eyes.

**Other Personal Protection Data:** Ensure that eyewash stations and safety showers are proximal to the work-station location.

Ingredients	Exposure Limit - ACGIH	Exposure Limit - OSHA	Immediately Dangerous to Life or Health - IDLH
Water	Not available.	Not available.	Not Available.
Sodium Hypochlorite, Solution	0.5 ppm As For Chlorine.	Not available.	Not Available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Liquid.

**Colour:** Clear Green to yellow.

**Odour:** Chlorine.

**pH** 11.5 - 13

**Specific Gravity:** 1.21

**Boiling Point:** Decomposition at 40°C / 104°F

**Freezing/Melting Point:** -25°C / -12°F

**Vapour Pressure:** 17.5 mmHg

**Vapour Density:** Not Available.

**% Volatile by Volume:** Not Available.

**Evaporation Rate:** Not Available.

**Solubility:** Miscible in water.

**VOCs:** Not Available.

**Viscosity:** Not Available.

**Molecular Weight:** Not Available.

**Other:** Not Available.

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Unstable above 40°C / 104 °F.

**Hazardous Polymerization:** Will not occur.

**Conditions to Avoid:** High temperatures. Exposure to light.

**Materials to Avoid:** Acids. Ammonia. Strong oxidizers. Reducing agents. Metals.

**Hazardous Decomposition Products:** When heated to decomposition, it emits acrid smoke and irritating fumes. Chlorine. Oxides of sodium. Oxygen.

### Additional Information:

Hypochlorites may react with primary amines to form nitrogen trichloride which explodes spontaneously in air. Hypochlorite bleach reacts with urea to form nitrogen trichloride which explodes spontaneously in air. Some metals accelerate the decomposition of Sodium Hypochlorite. Nickel. Copper. Tin. Iron and its alloys. Manganese.

## 11. TOXICOLOGICAL INFORMATION

### Principle Routes of Exposure

**Ingestion:** Corrosive. Causes burns to the mouth, throat and stomach. Causes vomiting, nausea, and diarrhea. Coma, shock and death may occur.

## 11. TOXICOLOGICAL INFORMATION

**Skin Contact:** Corrosive. May cause severe skin irritation. Prolonged contact may lead to burns and blisters and may aggravate dermatitis. May cause whitening or bleaching of the skin.

**Inhalation:** Corrosive to the respiratory passage. Causes irritation of the mouth, nose and throat. Repeated and/or prolonged exposures may cause productive cough, running nose, bronchopneumonia, pulmonary edema (fluid build-up in lungs) and reduction of pulmonary function. If mixed with acids or warmed to temperatures greater than 40 degrees Celsius, Sodium hypochlorite solutions release chlorine gas. This gas can cause severe irritation of the nose and throat. Exposures to high levels of chlorine gas may result in severe lung damage.

**Eye Contact:** Corrosive to eye tissue and may cause severe damage and blindness.

**Additional Information:** Aspiration may cause lung damage. Corrosive effects on the skin and eyes may be delayed, and damage may occur without the sensation or onset of pain.

**Acute Test of Product:**

**Acute Oral LD50:** Not Available.

**Acute Dermal LD50:** Not Available.

**Acute Inhalation LC50:** Not Available.

**Carcinogenicity:**

Ingredients	IARC - Carcinogens	ACGIH - Carcinogens
Water	Not listed.	Not listed.
Sodium Hypochlorite, Solution	Group 3	Not listed.

**Carcinogenicity Comment:** No additional information available.

**Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity:** Not Available.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicological Information:**

Ingredients	Ecotoxicity - Fish Species Data	Acute Crustaceans Toxicity:	Ecotoxicity - Freshwater Algae Data
Water	Not Available.	Not Available.	Not Available.
Sodium Hypochlorite, Solution	LC50 96 h (Pimephales promelas) 0.06-0.11 mg/L flow-through LC50 96 h (Pimephales promelas) 4.5-7.6 mg/L static LC50 96 h (Lepomis macrochirus) 0.4-0.8 mg/L static LC50 96 h (Lepomis macrochirus) 0.28-1 mg/L flow-through LC50 96 h (Oncorhynchus mykiss) 0.05-0.771 mg/L flow-through LC50 96 h (Oncorhynchus mykiss) >0.03-<0.19 mg/L semi-static LC50 96 h (Oncorhynchus mykiss) 0.18-0.22 mg/L static	Not Available.	EC50 24 h Skeletonema costatum 0.095 mg/L

**Other Information:**

Harmful to aquatic life at low concentrations. Toxicity is primarily associated with pH.

### 13. DISPOSAL CONSIDERATIONS

**Disposal of Waste Method:** Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.

**Contaminated Packaging:** Empty containers should be recycled or disposed of through an approved waste management facility.

### 14. TRANSPORT INFORMATION

**DOT (U.S.):**

**DOT Shipping Name:** HYPOCHLORITE SOLUTION

**DOT Hazardous Class** 8

**DOT UN Number:** UN1791

**DOT Packing Group:** III

**DOT Reportable Quantity (lbs):** Not Available.

**Note:** No additional remark.

**Marine Pollutant:** No.

**TDG (Canada):**

**TDG Shipping Name:** HYPOCHLORITE SOLUTION

**Hazard Class:** 8

**UN Number:** UN1791

**Packing Group:** III

**Note:** No additional remark.

**Marine Pollutant:** No.

### 15. REGULATORY INFORMATION

**U.S. TSCA Inventory Status:** All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

**Canadian DSL Inventory Status:** All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

**Note:** Not available.

#### U.S. Regulatory Rules

Ingredients	CERCLA/SARA - Section 302:	SARA (311, 312) Hazard Class:	CERCLA/SARA - Section 313:
Water	Not Listed.	Not Listed.	Not Listed.
Sodium Hypochlorite, Solution	Not Listed.	Listed	Not Listed.

**California Proposition 65:** Not Listed.

**MA Right to Know List:** Listed.

**New Jersey Right-to-Know List:** Listed.

**Pennsylvania Right to Know List:** Listed.

**WHMIS Hazardous Class:**

E CORROSIVE MATERIAL



## 16. OTHER INFORMATION

**Additional Information:**

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

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