

MATERIAL SAFETY DATA SHEET

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SECTION 1 – IDENTIFICATION	
PRODUCT IDENTIFIER:	SODIUM HYPOCHLORITE
PRODUCT USE:	Bleaching agent; household and laundry bleaching agent; bleaching agent in paper, pulp, textile industry; disinfectant for glass, ceramic and water; algicide and molluscicide in cooling water for power stations; bleach in alpha-olefin sulphonate production; reactant in hydrazine manufacturing.
MANUFACTURER:	Canexus Chemicals Canada Limited Partnership 100 Amherst Avenue North Vancouver, British Columbia, Canada V7H 1S4 Emergency, call: (604) 929-3441 To Request an MSDS, call: 1-800-699-6924

SECTION 2 – HAZARDS IDENTIFICATION

WHMIS CLASSIFICATION:

E - Corrosive Material



C - Oxidizing Material



EMERGENCY OVERVIEW:

Corrosive. Causes skin burns. Causes severe eye burns. May be fatal if swallowed.

EFFECTS OF SHORT-TERM (ACUTE) EXPOSURE:

SKIN CONTACT: Direct contact causes irritation and pain. Prolonged contact may cause burns.

EYE CONTACT: Damage can range from severe irritation and mild scarring to blistering, disintegration, ulceration, severe scarring and clouding. Glaucoma and cataracts are possible late developments.

INGESTION: Causes gastrointestinal irritation with abdominal pain, nausea, vomiting and diarrhea. May cause gastrointestinal burns.

INHALATION: May cause severe irritation of the gastrointestinal tract with sore throat, coughing, shortness of breath and delayed lung edema. May cause chemical burns to the respiratory tract.

EFFECTS OF LONG-TERM (CHRONIC) EXPOSURE:

Repeated or prolonged exposure of the skin to low concentrations of liquid can cause drying and cracking. There is no evidence of carcinogenicity in humans from occupational exposures.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Pre-existing skin disorders.

SODIUM HYPOCHLORITE

SECTION 3 – COMPOSITION

HAZARDOUS INGREDIENTS	% (w/w)	CAS NUMBER
Sodium Hypochlorite	10	7681-52-9
Sodium Hydroxide (caustic soda)	1.2	1310-73-2
Active Chlorine	12	7782-50-5

SECTION 4 – FIRST AID MEASURES

SKIN CONTACT: Remove all exposed clothing and wash exposed areas of the body twice with soap and water. Wash all exposed clothes with soap and water. Get medical attention if irritation persists after the area is washed.

EYE CONTACT: Irrigate exposed eyes with copious amounts of tepid water for at least 15 minutes. If irritation, pain, swelling, lacrimation or photophobia persist, get medical attention.

INGESTION: Never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or is convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 300 mL (10 oz.) of water. If milk is available, administer AFTER the water. If vomiting occurs naturally, have the victim lean forward to reduce risk of aspiration. Repeat administration of water.

INHALATION: Remove source of contamination or remove victim to fresh air. If breathing is difficult, it may be beneficial for a trained person to give oxygen. Ensure victim is completely at rest - allow no physical exertion. Obtain medical attention if symptoms persist.

GENERAL COMMENTS: Provide general supportive measures (comfort, warmth, rest). First-aid procedures should be reviewed by appropriate personnel familiar with sodium hydroxide and its conditions of use in the workplace.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT:	Not applicable	LOWER FLAMMABILITY LIMITS:	Not applicable	SENSITIVITY TO MECHANICAL IMPACT:	Not sensitive
AUTOIGNITION TEMPERATURE:	Not applicable	UPPER FLAMMABILITY LIMITS:	Not applicable	SENSITIVITY TO STATIC DISCHARGE:	Not sensitive

HAZARDOUS COMBUSTION PRODUCTS: Thermal decomposition at elevated temperatures will release chlorine.

EXTINGUISHING MEDIA: Does not burn but oxidizing materials increase the burning rate of combustible materials. Use extinguishing agents suitable for the surrounding fire.

FIRE FIGHTING INSTRUCTIONS: Evacuate area and fight fire from a safe distance. Wear adequate personal protective equipment. Approach fire from upwind. Remove or isolate materials not involved in the fire if it can be done without risk. Chemical resistant clothing and positive pressure SCBA may be required. Water may be used to keep fire-exposed containers cool to prevent rupture.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) HAZARD INDEX:

Not established

SECTION 6 – ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTION: Evacuate unnecessary personnel from spill area. Wear appropriate personal protective equipment. Ventilate area. Remove chemicals which can react with the spilled material if it can be done without risk. Do not touch spilled caustic.

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ENVIRONMENTAL PRECAUTIONS: Implement spill control plan. Stop or reduce leak if safe to do so. Prevent from entering sanitary or storm sewers, waterways, or confined spaces by diking with inert materials such as earth or sand.

REMEDIAL MEASURES: Restrict access to area until completion of cleanup. Ensure cleanup is conducted by trained personnel only. Use all appropriate personal protective equipment. Contain and absorb spill with inert materials. Neutralize with sodium bicarbonate, agricultural lime or crushed limestone. Notify government occupational health and safety and environmental authorities as per applicable regulations. In the United States, releases over 100 pounds must be reported to the National Response Center at 1-800-424-8802.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Take all precautions to avoid personal contact. Keep containers closed when not in use.

STORAGE: Store in a cool, dry, and well ventilated area. Store away from incompatible materials and direct light. Long-term storage is impossible without decomposition.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

EXPOSURE LIMITS:

Sodium Hypochlorite

AIHA WEEL-STEL: 2 mg/ m³ (15 min)

Chlorine

ACGIH TLV-C: 0.5 ppm

ACGIH TLV- STEL: 1.0 ppm

OSHA PEL-TWA: 0.5 ppm

Sodium Hydroxide

ACGIH TLV-C: 2 mg/m³

OSHA PEL-TWA: 2 mg/m³ (vacated 1989 OSHA PEL Ceiling limit 2mg/m³ still enforced in some states)

ENGINEERING CONTROLS: Use general or local exhaust ventilation to maintain exposure below the exposure limits. These controls may need to be augmented by the use of process or personnel enclosures, control of process conditions, or by process modification.

RESPIRATORY PROTECTION: Not normally required for most uses. NIOSH recommendations when necessary.

In Brazil, use equipment with certificate of approval emitted by the Ministry of Labour.

SKIN PROTECTION: Wear appropriate chemical protective gloves(rubber or PVC), boots and goggles.

EYE AND FACE PROTECTION: Chemical safety goggles are recommended. A full face shield may also be necessary depending of contact potential. The wearing of contact lenses is not recommended.

OTHER: Have a safety shower and eye wash station readily available in the immediate work area.

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SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear yellow liquid	MELTING POINT:	-25 °C
ODOUR:	Disagreeable, sweetish	BOILING POINT:	degradation at 110 °C (15% Sodium Hypochlorite)
pH:	14, strongly alkaline	CRITICAL TEMPERATURE:	Not applicable.
VAPOUR PRESSURE:	17.5 mm Hg @ 20 °C	DENSITY:	1.19 @ 20 °C
SOLUBILITY:	Soluble in water in all proportions.	PARTION COEFFICIENT: n-OCTANOL/WATER	Essentially zero.
VAPOUR DENSITY:	Not available	EVAPORATION RATE:	Essentially zero.

SECTION 10 - STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under normal conditions of temperature and pressure. Sodium hydroxide is present in sodium hypochlorite solutions to stabilize the product.

INCOMPATIBILITY: Strong acids, amines, reducing agents, metals, methanol, ammonia and ammonium salts.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen chloride, chlorine, sodium oxide.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE EFFECTS:

Sodium Hypochlorite

LD50 Rat oral: 8.91 g/kg

LD50 Mouse oral: 5800 mg/kg

Application of a 1% solution of sodium hydroxide is reported to cause necrosis of the cornea in a rabbit. Application of 0.5 mL of a 5% solution for 4 hours is reported to cause corrosive burns to rabbit skin.

CARCINOGENICITY: Sodium Hypochlorite ; IARC: Inadequate evidence. Not classifiable as human carcinogen (Group 3)

SENSITIZATION: Not a sensitizer

TERATOGENICITY: No information available

REPRODUCTIVE EFFECTS: Not expected to have reproductive effects

MUTAGENICITY: No information available

SECTION 12 - ECOLOGICAL INFORMATION

Sodium Hypochlorite

ECOTOXICOLOGICAL INFORMATION:

LC50 (96 hr) fathead minnows: 5.9 mg/L

Sodium hypochlorite can be acutely toxic to aquatic life through increase of aqueous pH to toxic levels.

ECOLOGICAL FATE INFORMATION:

Does not accumulate in the body. Dissociates in water.

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SECTION 13 - DISPOSAL CONSIDERATIONS

Following neutralization either at the spill site or at a waste management facility, the resultant sludge can be disposed of in a secure landfill. However, prior to implementing the disposal of waste residue, consult with environmental regulatory agencies for guidance on acceptable disposal practices.

SECTION 14 - TRANSPORT INFORMATION

CANADIAN TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:

Hypochlorite solution, Class 8, UN1791, PG III

US DOT HAZARDOUS MATERIALS REGULATIONS:

Sodium hydroxide solution, Class 8, UN1824, PG II

Reportable Quantity, RQ = 1,000 lbs.

BRAZILIAN TRANSPORTATION REQUIREMENTS:

Decreto Lei N 96.044 de 18.05.88: Regulamentação do Transporte Rodoviário de Produtos Perigosos

Portaria MT 204 de 20.05.1997: Instrução Complementar aos Regulamentos dos Transportes Rodoviários e Ferroviários de Produtos Perigosos

NBR 7500: Símbolos de Risco e Manuseio para o Transporte e Armazenagem de Materiais

NBR 7501: Terminologia - Transporte de Produtos Perigosos

NBR 7502: Transporte de Cargas Perigosas - Classificação

NBR 7503: Ficha de Emergência para o Transporte de Produto Perigoso - Características e Dimensões

NBR 7504: Envelope para o Transporte de Produtos Perigosos - Dimensões e Utilização

NBR 8285: Preenchimento da Ficha de Emergência para o Transporte de Produtos Perigosos - Procedimento

NBR 8286: Emprego de Simbologia para o Transporte de Produtos Perigosos - Procedimentos

NBR 9734: Conjunto de Equipamentos de Proteção Individual para Avaliação de Emergência e Fuga no Transporte Rodoviário de Produtos Perigosos – Procedimentos

NBR 9735: Conjunto de Equipamentos para Emergência no Transporte Rodoviário de Produtos Perigosos - Procedimentos

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SECTION 15 - REGULATORY INFORMATION

CANADIAN FEDERAL REGULATIONS: (not a comprehensive list)

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): All the ingredients are on the Domestic Substances List (DSL).

WHMIS CLASSIFICATION:

E - Corrosive material

C - Oxidizing material

WHMIS INGREDIENT DISCLOSURE LIST:

Sodium hypochlorite: Yes, 1%

Sodium hydroxide: Yes, 1%

Chlorine: Yes, 1%

CPR COMPLIANCE

This product has been classified with the hazard criteria of the CPR, and the MSDS contains all the information required by CPR.

UNITED STATES FEDERAL REGULATIONS: For Sodium Hypochlorite (not a comprehensive list)

TOXIC SUBSTANCES CONTROL ACT (TSCA) INVENTORY: All the ingredients are listed on the inventory.

OSHA: Not a Hazardous Substance under 29 CFR Section 1910, Subpart Z.

CERCLA: Hazardous Substance under 40 CFR Part 302, RQ = 100 lbs.

SARA 313: Not subject to the reporting requirements of 40 CFR Part 372

SARA 311/312 EPA HAZARD CATEGORIES: Immediate (Acute) Health, Reactive Hazard

SARA 302: Not subject to 40 CFR Part 355

SECTION 16 - OTHER INFORMATION

VERSION:	3.0
PREPARED BY:	Canexus Chemicals Responsible Care Department. If you have any questions, contact Canexus at: 1-800-699-6924
REVISIONS:	Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.