



MATERIAL SAFETY DATA SHEET

BLEACH 8.0% - 20.0%

Effective date: 18-Mars-2014

SECTION 1 : IDENTIFICATION	
Product identifier:	BLEACH
Product name :	Sodium Hypochlorite Aqueous solution, 8%w/w to 20.0%w/w
Product Use:	Chlorine based bleaching agents
Supplier's name:	LAVO Inc
Address :	11900 Boul. Saint-Jean Baptiste Montréal, Québec Canada H1C 2J3
Telephone :	1-800-361-6898 or 514-526-7783
Emergency phone :	CANUTEC (transport) 1-613-996-6666

SECTION 2 : HAZARD IDENTIFICATION	
Classification :	DANGER. CAUSE EYE BURNS. CAUSE SKIN BURNS.
Emergency Overview:	Clear, yellow green liquid. Chlorine odor. Danger. May develop chlorine if mixed with acidic solutions. Contact with acids, contamination or heating may cause the release of corrosive chlorine gas. May react with water, generating heat. Contact with metals may release small amounts of flammable hydrogen gas. Corrosive material. Causes eye burns. Prolonged contact may produce chemical burns to affected skin areas. May cause severe irritation to the nose, throat and respiratory tract. May cause severe irritation to the mouth, throat and stomach
POTENTIAL HEALTH EFFECTS:	
Signs and symptoms of short-term (acute) exposure	
<i>Inhalation :</i>	Inhalation of high concentrations of fumes or mists may cause severe irritation and corrosive damage to the nose, throat and upper respiratory tract.
<i>Skin :</i>	May cause chemical burns. Direct skin contact may cause skin burns and deep ulcerations.
<i>Eyes :</i>	May cause chemical burns. May cause blindness.
<i>Ingestion :</i>	Harmful if swallowed. May cause chemical burns to mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, and bleeding.
Effects of long-term (chronic) exposure :	Prolonged or repeated contact may cause drying, cracking and de-fatting of the skin. Repeated inhalation may cause permanent lung damage.
Signs and symptoms:	The product may cause burns to eyes, skin and mucous membranes.
Potential environmental effect :	Components of this product have been identified as having potential environmental concerns.

SECTION 3 : COMPOSITION/INFORMATION ON INGRÉDIENTS		
Ingrédients	CAS	Conc
Sodium Hydroxide	1310-73-2	0.2 - 5 %w/w
Sodium Hypochlorite	7681-52-9	8 – 20 %w/w
Eau	7732-18-5	90 - 100 %w/w



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SECTION 4 : FIRST AID MEASURES	
Inhalation :	Immediately remove person to fresh air. If breathing is difficult, give oxygen by qualified medical personnel only. If breathing has stopped, give artificial respiration. Seek immediate medical attention/advice.
Skin contact or clothing:	Take off immediately all contaminated clothing. Wash thoroughly with soap and water for at least 20 minutes. Obtain medical attention immediately. Discard or wash contaminated clothing before reuse..
Eye contact :	Flush eyes thoroughly with running water for at least 20 minutes, holding eyelids open to ensure complete flushing. Remove contact lenses, if present, after the the first 5 minutes, then continue rinsing eye. Seek immediate medical attention/advice.
Ingestion :	Call a poison control centre immediately. Do not induce vomiting. Have victim rinse mouth with water and then give one to two glasses of water to drink. Never give anything by mouth to an unconscious person. Seek immediate medical attention/advice. Do not give acidic antidotes such as juice, soft drinks, vinegar, etc.
Notes for physician :	Treat symptomatically.

SECTION 5 : FIRE FIGHTING MEASURES	
Fire hazards/conditions of flammability:	Not flammable under normal conditions of use. May react with water, generating heat. The heat that is generated may be sufficient enough to ignite nearby combustible materials. Product may react with some metals and release small amounts of flammable hydrogen gas.
Flammability classification (OSHA 29 CFR 1910.1200):	Not flammable.
Oxidizing properties:	None known.
Explosion data: Sensitivity to mechanical impact / static discharge:	Not expected to be sensitive to mechanical impact or static discharge.
Suitable extinguishing media:	Treat with surrounding material. Do not use dry chemical extinguishing agents that contain ammonium compounds.
Special fire-fighting procedures/equipment:	Firefighters should wear proper protective equipment and self contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Use water to cool fire exposed containers.
Hazardous combustion products:	May include and are not limited to: Chlorine; Hydrogen chloride gas; Oxygen; Sodium oxides.

SECTION 6 : ACCIDENTAL RELEASE MEASURES	
Personal precautions:	Restrict access to area until completion of clean up. Ensure clean up is conducted by trained personnel only. Do not touch and walk through spilled material. All persons dealing with clean up should wear the appropriate protective equipment including self contained breathing apparatus. Do not touch damage damaged containers or spilled material unless wearing appropriate protective clothing.
Environmental precautions:	Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers, or any natural waterway or drinking supply.
Spill response/cleanup:	Remove all sources of ignition. Ventilate area of release. Stop the spill at source if it is safe to do so. Contain and absorb spilled liquid with non combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Flush with water. Do not flush into surface water or sanitary sewer system. Contaminated absorbent material may pose the same hazards as the spilled product. Notify the appropriate authorities as required.
Prohibited materials:	Do not use combustible absorbents, such as sawdust.



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SECTION 7 : HANDLING AND STORAGE	
Safe Handling procedures:	Wear chemically resistant protective equipment during handling. Use only in well ventilated areas. Avoid breathing vapor or mist. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Keep away from heat and flame. Keep away from incompatibles. Keep containers tightly closed when not in use. Empty containers retain residue (liquid and/or vapor) and can be dangerous.
Storage requirements :	Keep out the reach of children. Store in a cool, dry, well ventilated area. Keep away from incompatibles. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Protect from sunlight. Do not freeze.
Special packaging materials:	Always keep in containers made of the same materials as the supply container.

SECTION 8 : EXPOSURE CONTROLS AND PERSONAL PROTECTION					
Exposure Limits		ACGIH TLV		OSHA	
Ingredients	CAS	TWA	STEL	PEL	STEL
Sodium Hydroxide	1310-73-2	Ceiling 2 mg/m ³	N/D	Ceiling 2 mg/m ³	N/D
Sodium Hypochlorite	7681-52-9	N/D	2 mg/m ³ (AIHA WEEL)	N/D	N/D
Ventilation and engineering measures :	Use only in well ventilated areas. Use local exhaust if mist or spray is generated.				
Respiratory protection :	Respiratory protection is required if the concentrations exceed the TLV. NIOSH approved respirators are recommended. Seek advice from respiratory protection specialists. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4 02.				
Skin protection :	Impervious gloves must be worn when using this product. Advice should be sought from glove suppliers.				
Eye/face protection :	Chemical splash goggles must be worn when handling this material. A full face shield may also be necessary.				
Other protective equipment :	Wear resistant clothing and boots. An eyewash station and safety shower should be made available in the immediate working area.				
General hygiene considerations :	Avoid breathing vapor or mist. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.				

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES			
Physical state	Clear Liquid	Appearance	yellow-green liquid.
Odor	Chlorine odor	Odor threshold	N/Av
pH	11.5 -13.5	Density	1.10 - 1.18
Boiling Point	N/Av	Coefficient of water/oil distribution	N/Av
Melting/Freezing Point	N/Av	Solubility in water	Soluble
Vapor Pressure	N/Av	Evaporation rate	N/Av
Volatile organic Compounds	N/Av	Absolute pressure of container	N/Av
Flash Point	N/Av	Viscosity	N/Av
Flash Point, method	N/Av	Auto-ignition temperature	N/Av
Lower flammable limit	N/Av	Upper flammable limit	N/Av
Volatiles (% by weight)	N/Av	Flashback observed	N/Av



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SECTION 10 : STABILITE AND REACTIVITY

Stability/Reactivity:	Stable under the recommended storage and handling conditions prescribed. Contact with some reactive metals may produce flammable hydrogen gas. Product may slowly decompose in sunlight, generating small amounts of oxygen. Reacts with amines and ammonia compounds to form explosively unstable compounds. May develop chlorine if mixed with acidic solutions. Corrosive to metals.
Hazardous polymerization :	Not expected under prescribed storage and handling conditions.
Conditions to avoid	Avoid heat and open flame. Keep away from incompatibles. Keep container tightly closed when not in use. Keep away from direct sunlight.
Materials To Avoid And Incompatibility:	Acids. Oxidizers. Primary amines. Ammonium salts. Ammonia. Urea.
Hazardous decomposition products :	May include and are not limited to: Hydrogen chloride, Chlorine gas, Oxygen, Disodium oxide.

SECTION 11 : TOXICOLOGICAL INFORMATION

Target organs:	Eyes, skin, respiratory system and digestive system.			
Routes of exposure :	<i>Inhalation:</i> YES <i>Skin Absorption:</i> NO <i>Skin & Eyes:</i> YES <i>Ingestion :</i> YES			
Toxicological data:	There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.			
Ingredients	CAS	CL50(4hr) inh, rat	DL50 (Oral, rat)	DL50 (Rabbit, dermal)
Sodium Hydroxide	1310-73-2	Not available.	800 mL/kg	Not available.
Sodium Hypochlorite	7681-52-9	> 5250 mg/m ³	8200 mg/kg rat 5800 mg/kg mouse	> 10,000 mg/kg
Effect of acute exposure:				
Inhalation;	May cause chemical burns.			
Skin:	May cause chemical burns.			
Eyes;	May cause chemical burns. May cause blindness.			
Ingestion:	Avoid swallowing. May cause chemical burns to mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, and bleeding.			
Sensitization to material :	No data available to indicate product or components may be respiratory sensitizers. May cause an allergic skin reaction (e.g. hives, rash) in some hypersensitive individuals.			
Chronic effect:	Non-Hazardous by WHMIS criteria.			
Carcinogenic Status:	Non-Hazardous by WHMIS criteria.			
IARC Groupe 3 (Not classifiable) :				
Sodium Hypochlorite	7681-52-9	Monograph 52 (1991) (listed under Hypochlorite salt)		
Mutagenicity :	Non-Hazardous by WHMIS criteria.			
Reproductive effects :	Non-Hazardous by WHMIS criteria.			
Teratogenicity :	Non-Hazardous by WHMIS criteria.			
Synergistic materials:	Not available.			
Irritancy :	Corrosive.			

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity – Freshwater Algae – Acurate Toxicity		
Sodium Hypochlorite	7681-52-9	24 Hr EC50 Skeletonema costatum: 0.095 mg/L
Ecotoxicity – Freshwater Fish – Acurate Toxicity		
Sodium Hydroxide	1310-73-2	LC50 Truite arc-en-ciel :1149mg/L Chinock salmon :152 mg/L
Sodium Hypochlorite	7681-52-9	96 Hr LC50 Pimephales promelas: 0.06 - 0.11 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: 4.5 - 7.6 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 0.4 - 0.8 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 0.28 - 1 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 0.05 - 0.771 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 0.03 - <0.19 mg/L [semi-static]; 96 Hr LC50 Oncorhynchus mykiss: 0.18 - 0.22 mg/L [static]




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SECTION 12 : ECOLOGICAL INFORMATION (CONT'D)		
Ecotoxicity – Water Flea – Acurate Toxicity		
Sodium Hydroxide	1310-73-2	Not available.
Sodium Hypochlorite	7681-52-9	96 Hr EC50 Daphnia magna: 2.1 mg/L; 48 Hr EC50 Daphnia magna: 0.033 - 0.044 mg/L [Static]
Ecotoxicity – Water Flea – Acurate Toxicity		
Sodium Hydroxide	1310-73-2	Not available.
Sodium Hypochlorite	7681-52-9	96 Hr EC50 Daphnia magna: 2.1 mg/L; 48 Hr EC50 Daphnia magna: 0.033 - 0.044 mg/L [Static]
Mobility :	No data is available on the product itself.	
Persistence :	No data is available on the product itself.	
Bioaccumulation Potential:	No data is available on the product itself.	
Other Adverse environmental effects :	No data is available on the product itself.	

SECTION 13 : DISPOSAL CONSIDERATIONS	
Handling for Disposal :	Handle waste according to recommendations in Section 7.
Methods of Disposal:	Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.

SECTION 14 : TRANSPORT INFORMATION			
Transportation of Dangerous Goods (TDG - Canada) :			
Regulations	Compounds	UN number	Class
	more than 7% available chlorine.		
Canada (TMD)	HYPOCHLORITE SOLUTION	UN1791	8
United States (DOT)	HYPOCHLORITE SOLUTION	UN1791	8
Packaging exceptions:	Limited quantity ≤ 5L.		

SECTION 15 : REGULATORY INFORMATION		
Canadian federal regulations :	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.	
Canada - WHMIS – Ingredient Disclosure List		
Sodium Hydroxide	1310-73-2	1%
Sodium Hypochlorite	7681-52-9	1%
WHMIS classification	Class E Corrosive	WHMIS labeling: 
WHMIS status	Controlled	
Canadian inventory status: All components of this product are either on the Domestic Substances List (DSL), the Non Domestic Substances list (NDSL) or exempt.		



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SECTION 16 : OTHER INFORMATION	
HMIS LEGEND	0- Minimal 1-Slight 2-Moderate 3-Serious Health: 3 Flammability : 0 Reactivity : 1
Other information:	For an update MSDS, Please contact the supplier/manufacturer listed on the first page of the document. Reference: MSDS of suppliers. SIMDUT regulation
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Issuing date:	18-Mars-2014
Due date:	Mars-2017