11900, rue St-Jean-Baptiste
Montreal, Quebec, H1C 2J3

LAVO "12" - 12% BLEACH
SODIUM HYPOCHLORITE SOLUTION
(W.H.M.I.S.: CLASS E, D_2B)

MATERIAL SAFETY DATA SHEET
Date issued: July 1, 2011

EMERGENCY TELEPHONE NUMBERS: (514) 526-7783

PRODUCT IDENTIFICATION:

Product Name:	Sodium Hypochlorite Solution LAVO 12
Chemical Name:	Sodium Hypochlorite
Synonyms:	Bleach; Javel Water
Chemical Family:	Chlorite
Molecular Formula:	NaOCl
Product Use:	Water Purification, Bleaching Agent and Desinfectant

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HAZARDOUS INGREDIENTS OF MATERIAL:

Hazardous Ingredients	% W/V	ACGIH TWA	CAS No.
Sodium Hypochlorite	12 – 14	0,5 ppm	7681-52-9

PHYSICAL PROPERTIES:

Appearance and Odour:	Clear, greenish-yellow aqueous solution with a strong chlorine odour.
Boiling Point:	Slowly decomposes at 40^{o} C to NaCl and $NaClO_3$
Melting/Freezing Point:	- 25^{o} C (- 12^{o} F) for a 12 % solution.
Vapour Pressure:	17,5 mmHg at 20^{o} C
Specific gravity:	≈ 1,175 g/mL
Vapour Density:	No data
Evaporation Rate:	No data
Solubility:	Miscible in all proportion in water
% Volatile by Volume:	No data
pH:	11,5 – 13,0
Coefficient of water/oil distribution:	No data

REACTIVITY DATA:

Stability:

Under Normal Conditions:	Unstable above 40^{o} C, when exposed to sunlight or in contact with metals.
Under Fire Conditions:	Unstable
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	Temperatures above 40^{o}C
Materials to Avoid:	Acids, ammonia, oxidizable materials, urea, nickel, copper, manganese, iron, most metals.

Hazardous Decomposition or Combustion Products:

Chlorine gas when in contact with acids; oxygen when in contact with metals

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ACCREDITATION:

Lavo ''12'' is NSF approved, Standard 60.

SHIPPING DESCRIPTION (Under the TDG Act)

For containers of more than 5L, not in limited quantity:

Shipping Name:	Hypochlorite Solution
Shipping Class/Division:	Corrosive Class 8
Product Identification No (PIN):	UN 1791
Packing Group:	III

FIRE AND EXPLOSION DATA

Flash Point (method):	Non-flammable
Autoignition Temperature:	Not applicable
Flammability Limits in air (%):	UEL: Not applicable
	LEL: Not applicable

Fire Extinguishing Media:	Use appropriate media to extinguish surrounding fire.
Fire Fighting Procedures:	Full protection equipment, including a self-contained breathing apparatus, should be worn. Remove storage vessels from fire zone if possible. Use water spray to cool containers to avoid pressure build-up.

TOXICOLOGICAL AND HEALTH DATA

Recommended Exposure Limit: ACGIH TLV : 0,5 ppm (as Chlorine)

Toxicological Data:

Sodium Hypochlorite :	LD 50 (oral, rat)	= 8910 mg/Kg
	LC 50 (inhalation, rat)	> 10,500 mg/m^3/H
Carcinogenicity Data:	The ingredients of this product are not listed as carcinogens.	
Reproductive Effects:	No information is available.	
Teratogenicity Data:	No information is available.	

Synergistic Materials: None known.

Effect of exposure when:

Inhaled:	**Corrosive !** May cause irritation of the nose and upper respiratory tract, headache and coughing.
In contact with the skin:	**Corrosive !** Can cause severe local irritation, burns and blisters. Prolonged or repeated contact with diluted solutions may bleach skin or cause dermatitis.
In contact with the eyes:	**Very Corrosive !** Can cause irritation and severe damages resulting in blindness.
Ingested:	**Corrosive !** Burning in mouth and throat. Severe pain, vomiting, diarrhea.

FIRST AID PROCEDURES WHEN: WARNING CORROSIVE !

Inhalation:	Move victim to fresh air. Give artificial respiration **ONLY** if breathing has stopped. Obtain medical attention immediately.
Skin contact :	Remove contaminated clothing. Flush affected area with water for at least **20 minutes**. Obtain medical attention.
Eye contact :	Flush immediately eyes with running water for at least **30 minutes** holding eyelids open. **Obtain medical attention immediately.**
Ingestion:	If victim is alert and not convulsing, rinse out mouth and give 1/2 to 1 glass of water to dilute material. **DO NOT** induce vomiting. **Obtain medical attention immediately.**

PREVENTIVE MEASURES:

Engineering Controls:	Local exhaust ventilation.
Respiratory Protection:	NIOSH/MSHA approved air-purifying respirator equipped with Chlorine cartridges when necessary.
Skin Protection:	Use rubber gloves and apron. Rubber boots if necessary also.
Eye Protection:	Use chemical safety goggles when there is potential for eye contact.

Other Personal Protective Equipment:

Safety showers and eyewash fontains should be installed in storage and handling areas.

Handling Procedures and Equipment:
Protect containers against physical damage.

Storage Temperature (^{o}C): Below 29^{o}C and above freezing point.

Storage Requirements: Store in a cool (below 29^{o}C) dry, well-ventilated area away from incompatibles and direct sunlight. Long-term storage is impossible without decomposition. Use polyethylene containers.

Other Precautions: No special requirements.

ENVIRONMENTAL PROTECTION DATA:

Steps to be taken in the event of a spill or leak:
Ventilate area. Stop and contain leak or spill. Absorb using an inert material (sand, ashes, etc.), collect and dispose. For recovery, pump into polyethylene containers.

Waste Disposal Methods: Consult federal, provincial, state and local regulations on chemical waste disposal.

ADDITIONAL INFORMATION AND SOURCES USED:

SAX, N.I., Dangerous Properties of Industrial Materials.
Supplier's MSDS

Prepared by: **Lavo Inc (QC dept)**