

Lavo Inc./ Dutch Products Inc  
11900 boul. St-Jean-Baptiste  
Montréal (Québec)  
H1C 2J3

**19% TRADE BLEACH**  
**SODIUM HYPOCHLORITE SOLUTION**  
(W.H.M.I.S.: CLASS E, D<sub>2</sub>B)

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**MATERIAL SAFETY DATA SHEET**

Date issued: September 2010

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**EMERGENCY TELEPHONE NUMBERS:**

(514) 526-7783

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**PRODUCT IDENTIFICATION:**

Product Name: Sodium Hypochlorite Solution 19% Trade  
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	ACGIH		CAS No.
	% W/V	TWA	
Sodium Hypochlorite	19 - 22	0,5 ppm	7681-52-9
Sodium Hydroxide	0.3 – 2.0	not avail.	1013-73-2

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**PHYSICAL PROPERTIES:**

**Product is Corrosive**

Appearance and Odour: Clear, greenish-yellow aqueous solution with a strong chlorine odour.

Boiling Point: Slowly decomposes at 40<sup>o</sup> C to NaCl and NaClO<sub>3</sub>

Melting/Freezing Point: approximately - 25<sup>o</sup> C

Specific gravity: ≈ 1,26 g/mL

Vapour Pressure @ 20°C: 12 mm Hg for a 12.5% NaOCl

Solubility: Miscible in all proportion in water

pH: 11,5 - 14,0

Sensitivity to Mechanical Impact: No

Sensitivity to Static Discharge: No data

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## REACTIVITY DATA:

Stability:

Under Normal Conditions: Unstable above 40<sup>o</sup> 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<sup>o</sup>C

Materials to Avoid: Acids, ammonia, oxidizers, urea, nickel, copper, cobalt, iron manganese, most metals and Quaternary Ammonium salts.

Hazardous Decomposition or Combustion Products:

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

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## ACCREDITATION

Lavo/Dutch 19% Trade is NSF approved Standard 60

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## SHIPPING DESCRIPTION (Under the TDG Act)

Shipping Name: Hypochlorite Solution

Shipping Class/Division: Corrosive Class 8

Product Identification No : UN 1791

Packing Group: II

For all transportation Incidents, call CANUTEC 1-613-996-6666

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## 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.

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## TOXICOLOGICAL AND HEALTH DATA

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

WARNING : causes respiratory tract irritation, eye and skin burns, can cause lung damage

### Toxicological Data:

Sodium Hypochlorite : LD 50 (oral, rat) = 8910 mg/Kg  
LC 50 (inhalation, rat) > 10,500 mg/m<sup>3</sup>/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: **Very Corrosive !** Can cause irritation of the nose and upper respiratory tract, headache and coughing. Inhalation of high concentration can result in permanent lung damage

In contact with the skin: **Very 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: **Very Corrosive !** Burning in mouth and throat and entire gastrointestinal tract . Severe pain, vomiting, diarrhea.

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### FIRST AID PROCEDURES WHEN:      WARNING VERY CORROSIVE !

Inhalation: Move victim to fresh air.  
Give artificial respiration **ONLY** if breathing has stopped. Call 911. 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 **20- 30 minutes** holding eyelids open.  
**Obtain medical attention immediately.**

Ingestion: **Obtain medical attention immediately.** 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 unless told so by a doctor.

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### PREVENTIVE MEASURES:

Engineering Controls:	Local exhaust ventilation. Avoid breathing mist or vapor.
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.
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 (°C):	Below 29°C and above freezing point.
Storage Requirements:	Store in a cool (below 21°C) dry, well-ventilated area away from incompatibles and direct sunlight. Long-term storage is impossible without decomposition. Use polyethylene containers and store in the dark at the lowest possible temperature but keep from freezing.
Other Precautions:	No special requirements.

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### ENVIRONMENTAL PROTECTION DATA:

#### Steps to be taken in the event of a spill or leak:

Ventilate area. Stop and contain leak or spill. This material is harmful to aquatic life. 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.
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### ADDITIONAL INFORMATION AND SOURCES USED:

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

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The information contained herein is offered only as a guide to the handling of this specific material and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied and Lavo Ltée will not be liable for any damages, losses, injuries or consequential damages which may result from the use or reliance on any information contained herein.

Prepared by: **Lavo Inc**