

KHLORE

SECTION 01: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:..... KHLORE
 PRODUCT CODE(S)..... INS-SF-KHLORE12
 CHEMICAL FAMILY..... Sodium Hypochlorite Solution 10%-15%. Commercial Garde.
 RECOMMENDED USE:..... NSF mul 97mg/L. Alkaline Hypochlorite Solution is used as an oxidizing and bleaching agent. . For industrial, institutional, swimming pool uses. Food plant use. For use in industrial recirculating cooling water systems. For municipal water treatment of sewage and industrial effluent and for sanitization. Use for sanitization and disinfection. Brewery pasteurizers.
 SUPPLIER NAME AND ADDRESS Le Groupe Dissan, 9900 Boul. Du Golf, Anjou (Qué), H1J 2Y7 Tel.: (514) 789-6363

24 HOUR EMERGENCY NUMBER:..... CANUTEC 24-Hour Number: 613-996-6666.

SECTION 02: HAZARD IDENTIFICATION



SIGNAL WORD..... DANGER.
 GHS CLASSIFICATION:..... Serious Eye Damage/ Eye Irritation Category 1. Skin corrosion Category 1. Specific Target Organ Toxicity Single Category 3. Respiratory tract irritation Category 1. Acute aquatic toxicity Category 1. Chronic aquatic toxicity Category 1.
 HAZARD STATEMENTS..... H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H335 May cause respiratory irritation. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects.
 PRECAUTIONARY STATEMENTS..... P260 Do not breathe dust/fume/gas/mist/vapours/spray. P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P310 Immediately call a POISON CENTER or doctor/physician. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P501 Dispose of contents/container to an approved waste disposal plant.

SECTION 03: COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	CAS #	WT. %
Sodium Hypochlorite	7681-52-9	10-15
Sodium Hydroxide	1310-73-2	0.5-1.5

SECTION 04: FIRST AID MEASURES

ROUTES OF EXPOSURE..... Eye, Skin, Ingestion and Inhalation.
 INHALATION..... Remove victim to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get immediate medical attention. Call a poison center or physician.
 EYE CONTACT..... Immediately hold eyelids open and flush with water for at least 15 minutes. Check for and remove any contact lenses if easy to do. Consult a physician.
 SKIN CONTACT..... Immediately flush skin with plenty of water for 15 minutes. Remove contaminated clothing and wash before reuse. Consult a physician.
 INGESTION..... Call immediately a poison centre or a doctor. Do not induce vomiting or give anything by mouth to an unconscious person. Rinse out mouth with water.
 ACUTE SYMPTOMS/EFFECTS
 Eyes:..... Causes eye burns. Causes eye irritation.

SECTION 04: FIRST AID MEASURES

Ingestion:.....	May cause severe irritation damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding and eventually death.
Skin:.....	Causes severe burns. Causes skin irritation. Direct skin contact may cause skin burns, deep ulcerations and possibly permanent scarring.
Inhalation:.....	Inhalation of high concentrations of fumes or mists may cause severe irritation and corrosive damage to the nose, throat and upper respiratory tract.
DELAYED SYMPTOMS/EFFECTS.....	Prolonged or repeated contact may cause drying, cracking and de fattening of the skin.
GENERAL ADVICE:.....	Consult a physician. Show this safety data sheet to the doctor.

SECTION 05: FIRE FIGHTING MEASURES

CONDITIONS OF FLAMMABILITY.....	Non-flammable substance. Non combustible substance.
SUITABLE EXTINGUISHING MEDIA.....	Use fire-extinguishing media appropriate for surrounding materials. Use Water spray, Alcohol-resistant foam, Dry chemical or Carbon dioxide.
UNSUITABLE EXTINGUISHING MEDIA.....	Do not use dry chemical extinguishing agents that contain ammonium compounds.
SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS	Firefighter 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 dioxides.
EXPLOSION HAZARDS:	
Sensitivity to static discharge:.....	No data available.
Sensitivity to mechanical impact:....	No data available.

SECTION 06: ACCIDENTAL RELEASE MEASURES

PERSONNAL PRECAUTIONS:.....	Restrict access to area until completion of clean up. Evacuate personnel to safe areas. 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 damaged containers or spilled material unless wearing appropriate protective clothing. Use personnel protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.
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. Prevent further leakage or spillage if safe to do.
METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING	Contain and absorb spilled liquid with non combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal. 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.

SECTION 07: HANDLING AND STORAGE

HANDLING PROCEDURES.....	Use good industrial hygiene practices in handling this material. Do not eat, drink or smoke when using this product. Use in well ventilated areas. Do not get in eyes, on skin or on clothing. Avoid inhalation of mists/vapours/fumes. Wash thoroughly after handling. Keep container tightly closed.
STORAGE NEEDS.....	Keep out of reach of children. Protect from sunlight. Keep container tightly closed. Store in a cool, dry and well ventilated area. Do not store near acids.
STORAGE TEMPERATURE.....	<30°C.

SECTION 08: EXPOSURE CONTROLS / PERSONAL PROTECTION

INGREDIENTS	ACGIH TLV		PEL	OSHA PEL		REL	NIOSH
	TWA	STEL		STEL	STEL		
Sodium Hypochlorite	Not established	Ceiling: 2 mg/m3	2 mg/m3	Not established	Not established	Not established	Not established
Sodium Hydroxide	Not established	2 mg/m3	2 mg/m3	Not established	Not established	Not established	Not established
ACGIH TLV:.....	American Conference of Governmental Industrial Hygienists - Threshold Limit Value.						
OSHA PEL:.....	Occupational Safety and Health Administration - Permissible Exposure Limits.						
NIOSH IDLH:.....	Immediately Dangerous to Life or Health.						
ENGINEERING CONTROLS.....	Use under well-ventilated conditions or with respiratory protection.						
GENERAL HYGIENE CONSIDERATIONS:..	Avoid breathing vapor or mist. Avoid contact with skin, eyes and clothing. Remove soiled clothing and wash it thoroughly before reuse. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Do not eat, drink, smoke or use cosmetics while working with this product.						

SECTION 08: EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTION EQUIPMENT: As required by employer. Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workspace.

Eye / Face protection:..... Wear safety glasses with side shields or goggles.
 Hand protection:..... Wear protective gloves. Gloves must be inspected prior to use.
 Respiratory protection:..... Use appropriate respiratory protection if there is the potential to exceed the exposure limit(s). Use a full face respirator with multi-purpose combination or Wear self contained breathing apparatus.

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE..... Clear, pale yellow liquid. Translucent.
 COLOUR..... Yellow to greenish.
 ODOUR..... Chlorine odor.
 ODOUR THRESHOLD (ppm)..... No information available.
 pH..... >12.5.
 DENSITY..... 1.10-1.25 g/mL.
 % SOLID..... 16 to 26.
 FREEZING POINT (°C)..... -30°C to -20°C.
 BOILING POINT (°C)..... 96 to 120°C.
 FLASH POINT (°C), Method..... Not applicable. Product does not sustain combustion.
 EVAPORATION RATE..... No information available.
 FLAMMABILITY (SOLIDS & GASES)..... Not applicable.
 UPPER/LOWER FLAMMABILITY OR No information available.
 EXPLOSIVE LIMITS
 VAPOUR PRESSURE (mm Hg)..... < 2.3 kPa (17.5 mm Hg @ 20°C).
 VAPOUR DENSITY (AIR=1)..... Heavier than air.
 SOLUBILITY IN WATER (% W/W)..... Soluble in cold water.
 COEFFICIENT OF WATER/OIL No information available.
 DISTRIBUTION
 AUTO IGNITION TEMPERATURE (°C)..... No information available.
 DECOMPOSITION TEMPERATURE..... No information available.
 VISCOSITY..... Not applicable.

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY..... Stable under the recommended storage and handling conditions prescribed.
 REACTIVITY..... React vigorously with acids. Reacts with amines and ammonia to form explosively unstable compounds. May develop chlorine if mixed with acidic solutions. Contact with some reactive metals may produce flammable hydrogen gas. Corrosive to metals.

HAZARDOUS POLYMERIZATION..... Hazardous polymerization cannot occur.
 CONDITIONS TO AVOID..... Avoid heat and open flame. Exposure to sunlight. Do not mix with other chemicals.
 INCOMPATIBILITY..... Avoid contact with the following materials: Urea, Ammonia, Amides, Amines, Nitrogen containing compounds, Combustible materials, Organic materials, Metals, Reducing materials, Hydrocarbons materials, Alcohols, Ether. Contact with Magnesium, galvanized Zinc, Tin, Chromium, Brass and Bronze generates explosive Hydrogen.

HAZARDOUS PRODUCTS OF May include and are not limited to: Hydrogen chloride, Chlorine gas, Sodium dioxide.
 DECOMPOSITION

SECTION 11: TOXICOLOGICAL INFORMATION

INGREDIENTS	LC50	LD50
Sodium Hypochlorite	Inhalation, Rat: > 10.5 mg/kg	Oral Rat: 8200 mg/kg; Oral Mice: 5800 mg/kg; Dermal Rat:>2000 mg/kg; Dermal Rabbit: >10000 mg/kg
Sodium Hydroxide	Not established	Oral Rat: 2400mg/kg Dermal Rabbit: >2000mg/kg
ROUTE OF EXPOSURE.....	Eyes, skin, respiratory system and digestive system.	
POTENTIAL EFFECTS ON HUMANS		
Eye contact.....	Causes eye burns. Causes severe eye damage.	
Skin contact.....	Causes skin burns. Causes skin irritation.	
Inhalation.....	Harmful if inhaled. May cause respiratory tract irritation or chemical burns.	
Ingestion.....	Harmful if swallowed. May cause severe irritation and corrosive damage to mouth, throat and stomach.	
CHRONIC EFFECTS ON HUMANS.....	Safe handling of this material on a long term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures.	
SENSITIZATION.....	No information available.	

SECTION 11: TOXICOLOGICAL INFORMATION

TARGET ORGANS.....	Contains material which may cause damage to the following organs: upper respiratory tract, skin, eye, lens of cornea and stomach.
CARCINOGENICITY.....	No evidence of carcinogenic effects.
Carcinogen classification code	
ACGIH.....	A4 - Not classifiable as a human carcinogen (Sodium Hypochlorite). No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
IARC.....	3 - Group 3: Not classifiable as to its carcinogenicity to humans (Sodium Hypochlorite).
International Agency for Research on Cancer	
MUTAGENICITY.....	No information available.
REPRODUCTIVE EFFECTS.....	No information available.
TERATOGENICITY.....	No information available.
SPECIFIC TARGET ORGANS TOXICITY - .	No information available.
Single exposure	
SPECIFIC TARGET ORGANS TOXICITY - .	No information available.
Repeated exposure	
ASPIRATION HAZARD.....	No information available.
SIGNS AND SYMPTOMS OF EXPOSURE..	Symptoms may include stinging, tearing, redness, swelling and blurred vision. Permanent eye damage including blindness could result. Burning sensation, Cough, Wheezing, Laryngitis, Shortness of breath, Spasm, Inflammation and Edema of the Larynx, Inflammation and Edema of the bronchi and Pneumony edema.
SYNERGISTIC MATERIALS.....	No information available.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY DATA, Sodium Hypochlorite:	Acute 96Hrs LC50 Rainbow trout: 0.030 - 0.070 mg/L. Acute 48Hrs LC50 Daphnia magna: 0.032 - 0.036 mg/L.
ECOTOXICITY DATA, Sodium Hydroxide:...	Acute 96Hrs LC50 fish Guppy Poecilia reticulata: 196 mg/L Chronic 96Hrs NOEC fish Guppy Poecilia reticulata: 56 mg/L.
MOBILITY IN SOIL.....	No information available.
BIODEGRADABILITY.....	No information available.
BIOACCUMULATION.....	No information available.
OTHER ADVERSE EFFECTS.....	Very toxic to aquatic life with long lasting effects.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL.....	The disposal of the product must be made in an approved sanitary landfill or in a foundry in accordance with state, provincial and/or federal regulations.
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SECTION 14: TRANSPORT INFORMATION

Domestic Substances list, DSL.....	All components of this product are either on the Domestic Substances List, the Non Domestic Substances List or exempt.
Divulgence list of ingredients.....	CAS: 7681-52-9 Sodium Hypochlorite, 1%.
TDG CLASSIFICATION.....	UN: 1791 Class: 8 Packing group: III Shipping name: Hypochlorite solution, n.o.s. (Marine pollutant: No Poison Inhalation Hazard: No)
DOT US: Department of Transport US.....	UN: 1791 Class: 8 Packing group: III Shipping name: Hypochlorite solution, n.o.s. (Marine pollutant: No Poison Inhalation Hazard: No)
IMDG: International Maritime Dangerous Goods	UN: 1791 Class: 8 Packing group: III Shipping name: Hypochlorite solution, n.o.s. Marine pollutant: No.
IATA: International Air Transportation Association	UN: 1791 Class: 8 Packing group: III Shipping name: Hypochlorite solution, n.o.s.

SECTION 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION.....	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and this document contains all the information required by the Controlled Products Regulations. Class E: Corrosive Material. Class C: Oxidizing Material. Class D1B: Materials Causing Immediate/Serious Effects - Toxic Material. Class D-2B: Toxic material Causing other toxic effects.
Pest Management Regulatory Agency, PMRA	Read the approved PCPA label prior to using or handing the pest control product. This chemical is a pest control product registered by Health Canada PMRA and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. Following is the hazard information required on the pest control product label: DANGER. Corrosive for eyes and skin.

SECTION 16: OTHER INFORMATION

F0007-0165

DISCLAIMER:..... The information in the Material Safety Data Sheet is offered for your consideration and guidance when exposed to this product. Lavo Inc. expressly disclaims all expressed or implied warranties for the accuracy or completeness of the data contained herein and assumes no responsibilities for any involved damages by above data. Product's users have to do their own tests to establish the applicability of the information for a specific use of the product. MSDS data does not apply to use with any other product or in any other process.

PREPARED BY: Regulatory Affairs

PREPARATION DATE..... DEC 22/2015