



KENCRO

CHEMICALS

SODIUM HYPOCHLORITE SOLUTION

MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY INFORMATION

PRODUCT IDENTIFIER: SODIUM HYPOCHLORITE SOLUTION
PRODUCT USE: DISINFECTION, ODOUR CONTROL, LAUNDRY, WATER, SEWAGE AND INDUSTRIAL WASTE TREATMENT, HARD SURFACE CLEANER AND BIOCIDES.
CHEMICAL FAMILY: CHLORITE
SUPPLIER'S NAME AND ADDRESS: KENCRO CHEMICALS LIMITED
2172 WYECROFT RD., UNIT #4
OAKVILLE, ON
L6L 5V6
905-827-4133
24 HR. EMERGENCY NUMBER: 613-996-6666 (CANUTEC)

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	C.A.S. #	WT.%	LC50	LD50 (ORAL, RAT)
SODIUM HYPOCHLORITE	7681-52-9	7-13	N/AV.	3-5g/kg

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
GREENISH, YELLOW SOLUTION.
OXIDIZER, REACTIVE, CORROSIVE.
MODERATE TO SEVERE IRRITANCY. WILL CAUSE IRRITATION AND PAIN TO SKIN AND EYES.

SIGNS AND SYMPTOMS OF SHORT-TERM EXPOSURE:

SKIN CONTACT: WILL CAUSE MODERATE IRRITATION TO SKIN. CAN CAUSE BURNS AND BLISTERS.
SKIN ABSORPTION: PROLONGED REPEATED SKIN CONTACT WITH SOLUTIONS CONTAINING AS LITTLE AS 4-6% SODIUM HYPOCHLORITE CAN CAUSE ALLERGIC CONTACT DERMATITIS. SYMPTOMS INCLUDE CHRONIC, ITCHY ECZEMA.
EYE CONTACT: CAN CAUSE IRRITATION, SEVERE BURNS AND CORNEAL DAMAGE, WHICH MAY RESULT IN BLINDNESS.
INHALATION: MIST CAN IRRITATE THE NOSE AND THROAT. FUMES MAY IRRITATE MUCOUS MEMBRANES AND CAUSE COUGHING OR PULMONARY EDEMA. EXPOSURE TO HIGH LEVELS OF CHLORINE GAS MAY RESULT IN SEVERE LUNG DAMAGE.
INGESTION: IF INGESTED, PRODUCT WILL CAUSE MEMBRANE IRRITATION AND PAIN AND INFLAMMATION TO DIGESTIVE TRACT. COULD CAUSE VOMITING AND SHOCK. HYPOCHLORITE SOLUTIONS RELEASE HYPOCHLOROUS ACID ON CONTACT WITH GASTRIC JUICES, AND INGESTION MAY ALSO CAUSE EDEMA OF THE PHARYNX AND LARYNX; REDUCED BLOOD PRESSURE, DELIRIUM AND COMA MAY OCCUR.
POTENTIAL CHRONIC HEALTH EFFECTS:
PROLONGED OR REPEATED CONTACT WITH DILUTE SOLUTIONS MAY BLEACH SKIN OR CAUSE DERMATITIS.

SECTION 4: FIRST AID MEASURES

INHALATION: IF INHALED, REMOVE VICTIM TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION ONLY IF BREATHING HAS STOPPED. DO NOT USE MOUTH-TO-MOUTH IF VICTIM INGESTED OR INHALED THE SUBSTANCE. INDUCE ARTIFICIAL RESPIRATION WITH THE AID OF A POCKET MASK EQUIPPED WITH A ONE-WAY VALVE OR OTHER APPROPRIATE RESPIRATORY MEDICAL DEVICE. IF SYMPTOMS PERSIST, CALL A PHYSICIAN.

SKIN CONTACT: REMOVE CONTAMINATED CLOTHING AND IMMEDIATELY FLUSH WITH RUNNING WATER FOR A MINIMUM OF 15 MINUTES. IF IRRITATION PERSISTS, REPEAT FLUSHING. DISCARD HEAVILY CONTAMINATED CLOTHING AND SHOES IN A MANNER WHICH LIMITS FURTHER EXPOSURE. OTHERWISE, WASH CLOTHING SEPERATELY BEFORE REUSE. CALL A PHYSICIAN IF IRRITATION DEVELOPS.

EYE CONTACT: IMMEDIATELY FLUSH WITH PLENTY OF RUNNING WATER, HOLDING EYELIDS OPEN FOR A MINIMUM OF 15 MINUTES. IF IRRITATION PERSISTS, REPEAT FLUSHING. DO NOT TRANSPORT VICTIM UNTIL THE RECOMMENDED FLUSHING PERIOD IS COMPLETED UNLESS FLUSHING CAN BE CONTINUED DURING TRANSPORT. CALL A PHYSICIAN IF IRRITATION PERSISTS.

INGESTION: DO NOT INDUCE VOMITING. RINSE MOUTH WITH WATER, AND THEN DRINK ONE GLASS OF WATER. CALL A PHYSICIAN IMMEDIATELY. NEVER GIVE ANYTHING BY MOUTH IF VICTIM IS UNCONSCIOUS OR RAPIDLY LOSING CONSCIOUSNESS OR IS CONVULSING. IF SPONTANEOUS VOMITING OCCURS, HAVE VICTIM LEAN FORWARD WITH HEAD DOWN TO AVOID BREATHING IN OF VOMITUS, RINSE MOUTH AND ADMINISTER MORE WATER.

NOTES TO PHYSICIAN: PROBABLE MUCOUS DAMAGE MAY CONTRAINDICATE THE USE OF GASTRIC LAVAGE.

SECTION 5: FIRE FIGHTING MEASURES

FIRE HAZARDS/CONDITION OF FLAMMABILITY:

NOT FLAMMABLE.

FLASH POINT: NONE

FLASH POINT METHOD: N/AP.

LOWER FLAMMABLE LIMIT: N/AP.

(% BY VOL.)

AUTO IGNITION TEMPERATURE: N/AP.

UPPER FLAMMABLE LIMIT: N/AP.

(% BY VOL.)

OXIDIZING PROPERTIES: N/AP.

FLAME PROJECTION LENGTH: N/AP.

EXPLOSION DATA: SENSITIVITY TO MECHANICAL IMPACT/STATIC DISCHARGE: N/AP.

SUITABLE EXTINGUISHING MEDIA:

IF INVOLVED IN FIRE USE WATER, OR CARBON DIOXIDE. DO NOT USE MONO AMMONIUM PHOSPHATE (MAP) TYPE EXTINGUISHERS DIRECTLY ON THIS PRODUCT. FOR LARGE FIRES USE AN ALL PURPOSE TYPE AFFF ALCOHOL FOAM RESISTANT MEDIUM EXPANSION ACCORDING TO FOAM MANUFACTURER'S RECOMMENDED TECHNIQUES. THE FOAM SUPPLIER SHOULD BE CONSULTED FOR RECOMMENDATIONS REGARDING FOAM TYPES AND DELIVERY RATES FOR SPECIFIC APPLICATIONS.

SPECIAL FIRE-FIGHTING PROCEDURES/EQUIPMENT:

USE WATER TO COOL CONTAINERS EXPOSED TO FIRE. FULL PROTECTION EQUIPMENT INCLUDING A SELF-CONTAINED BREATHING APPARATUS SHOULD BE WORN. REMOVE STORAGE VESSELS FROM FIRE ZONE IF POSSIBLE.

HAZARDOUS COMBUSTION PRODUCTS:

CHLORINE.

SECTION 6: ACCIDENTAL RELEASE MEASURES

LEAK AND SPILL PROCEDURES:

RESTRICT ACCESS TO THE AFFECTED AREA, USE PERSONAL PROTECTIVE EQUIPMENT, KEEP PEOPLE AWAY AND UPWIND OF THE SPILL OR LEAK. PREVENT PRODUCT FROM ENTERING WATERWAYS. DILUTE SMALL SPILLS WITH WATER AND ADD SODIUM SULFITE OR SODIUM METABISULPHITE. USE CLEAN NON-SPARKING TOOLS TO COLLECT MATERIAL AND PLACE IT INTO LOOSELY COVERED PLASTIC CONTAINERS FOR LATER DISPOSAL. FOR LARGE SPILLS CONTACT THE SUPPLIER. VAPOURS MAY BE SUPPRESSED BY USE OF A WATER FOG; RUN-OFF MUST BE CAPTURED FOR TREATMENT AND DISPOSAL. WILL FORM HAZARDOUS REACTION PRODUCTS.

SECTION 7: HANDLING AND STORAGE

SAFE HANDLING PROCEDURES:

AVOID BREATHING VAPOURS. AVOID CONTACT WITH SKIN, EYES AND CLOTHING. KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME. KEEP CONTAINERS CLOSED WHEN NOT IN USE. KEEP AWAY FROM INCOMPATIBLES. AVOID GENERATING MIST. EMPTY CONTAINERS MAY CONTAIN HAZARDOUS RESIDUES. USE CORROSIVE-RESISTANT TRANSFER EQUIPMENT WHEN DISPENSING.

STORAGE REQUIREMENTS:

PERSONNEL USING THIS PRODUCT SHOULD BE TRAINED ON ITS HAZARDS. STORE PRODUCT AT -10 TO 30°C AND AWAY FROM SUNLIGHT OR HIGH TEMPERATURES IN A COOL, SHADED AREA. DO NOT STORE ABOVE 30°C AND KEEP FROM FREEZING. KEEP CONTAINER CLOSED WHEN NOT IN USE. VENT CAPS SHOULD BE CHECKED WITH FULL PERSONAL PROTECTION.

INCOMPATIBLE MATERIALS:

MAY REACT VIOLENTLY WITH STRONG ACIDS PRODUCING CHLORINE GAS, WHICH IS TOXIC. OTHER INCOMPATIBLES INCLUDE ORGANIC MATERIAL, CELLULOSE, OXIDIZABLE MATERIALS, AMMONIA, UREA, AMMONIUM SALTS, ETHYLENEIMINE, CYANIDES, NITROGEN COMPOUNDS, ALCOHOLS, METALS, AND METAL OXIDES. REACTS WITH METALS TO PRODUCE FLAMMABLE HYDROGEN GAS.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

SEE COMPOSITION/INFORMATION ON INGREDIENTS, SECTION 2.

ENGINEERING CONTROLS:

USE LOCAL EXHAUST VENTILATION TO MAINTAIN LEVELS BELOW THE PEL. VENTILATE STORAGE TANK OUTSIDE. LOCAL EXHAUST VENTILATION SHOULD BE APPLIED WHEREVER THERE IS AN INCIDENCE OF POINT SURFACE EMISSIONS OR DISPERSION OF REGULATED CONTAMINANTS IN THE WORK AREA. SMOKING SHOULD BE PROHIBITED IN AREAS IN WHICH SODIUM HYPOCHLORITE IS STORED OR HANDLED.

GLOVES/TYPE:

WEAR CHEMICAL OR RUBBER GLOVES.

RESPIRATORY/TYPE:

NIOSH/MSHA APPROVED AIR-PURIFYING RESPIRATOR EQUIPPED WITH ACID MIST CARTRIDGES FOR CONCENTRATIONS UP TO 10 TIMES THE TLV. USE A SUPPLIED AIR RESPIRATOR IF CONCENTRATIONS ARE HIGHER OR UNKNOWN.

EYE/TYPE:

USE CHEMICAL SAFETY GOGGLES AND FACE-SHIELD WHEN THERE IS POTENTIAL FOR EYE CONTACT. MAINTAIN EYE WASH FOUNTAIN AND QUICK DRENCH FACILITIES IN WORK AREA.

FOOTWEAR/TYPE:

NEOPRENE OR RUBBER BOOTS.

CLOTHING/TYPE:

RUBBER APRON, LAB COAT, RAIN JACKET, PANTS OR OVERALLS AS APPROPRIATE.

OTHER/TYPE:

SAFETY SHOWERS AND EYEWASH STATIONS INSTALLED IN HANDLING AND STORAGE AREAS.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	LIQUID	APPEARANCE:	GREENISH-YELLOW SOLUTION
ODOUR:	CHLORINE LIKE, PUNGENT	ODOUR THRESHOLD:	NO DATA
PH:	12-14	BOILING POINT:	DECOMPOSES ON HEATING
SPECIFIC GRAVITY:	1.168	MELTING/FREEZING POINT:	-20°C
COEFFICIENT OF WATER/OIL		SOLUBILITY IN WATER:	MISCIBLE
DISTRIBUTION:	N/AV.	VAPOUR DENSITY (AIR=1):	N/AV.
EVAPOURATION RATE:	N/AV.	VAPOUR PRESSURE (mmHg) at 20°C:	22
MOLECULAR WEIGHT:	74.4		
MOLECULAR FORMULA:	NaOCl		

SECTION 10: REACTIVITY AND STABILITY DATA**STABILITY AND REACTIVITY:**

STABLE AT ROOM TEMPERATURE. UNSTABLE ABOVE 40°C, SUNLIGHT AND CONTACT WITH METALS. MAY DEVELOP CHLORINE IF MIXED WITH ACIDIC SOLUTIONS.

CONDITIONS TO AVOID:

KEEP AWAY FROM HIGH HEAT AND SUNLIGHT OR ULTRA-VIOLENT LIGHT. DO NOT STORE ABOVE 30°C. DO NOT ALLOW SOLUTIONS TO EVAPOURATE DRY. KEEP AWAY FROM INCOMPATIBLES.

HAZARDOUS DECOMPOSITION PRODUCTS:

CHLORINE GAS. THERMAL DECOMPOSITION: CHLORINE, SODIUM OXIDE, OXYGEN, OXIDES OF CHLORINE, SODIUM CHLORATE AND HYDROGEN.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA: REFER TO SIGNS AND SYMPTOMS OF SHORT-TERM EXPOSURE - SECTION 3.

CARCINOGENIC STATUS: NOT BY IARC OR ACGIH. NOT REGULATED BY OSHA AND NOT LISTED BY NTP.

REPRODUCTIVE EFFECTS: N/AV.

TERATOGENICITY: N/AV.

MUTAGENICITY: NOT ESTABLISHED.

SENSITIZATION TO MATERIAL:

N/AV.

SYNERGISTIC MATERIALS: NONE.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

PROLONGED OR REPEATED SKIN CONTACT CAN CAUSE ALLERGIC CONTACT DERMATITIS.

ADDITIONAL HEALTH HAZARDS: N/AV.

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL EFFECTS:

PRODUCT SHOULD NOT BE ALLOWED TO ENTER DRAINS OR WATER COURSES, OR BE DEPOSITED WHERE IT CAN AFFECT GROUND OR SURFACE WATERS.

IMPORTANT ENVIRONMENTAL CHARACTERISTICS:

NO INFORMATION AVAILABLE.

ECOTOXICOLOGICAL:

HARMFUL TO AQUATIC LIFE. AQUATIC TOXICITY: APPROXIMATELY 0.6 mg/l (BLUEGILL); APPROXIMATELY 1mg/l (DAPHNIA, 48 HOURS). LC50 PIMEPHALES PROMELAS (FATHEAD MINNOW): 1.40mg/l, EXPOSURE TIME: 96 HOURS.

SECTION 13: DISPOSAL CONSIDERATIONS

HANDLING FOR DISPOSAL: MAY BE POSSIBLE TO NEUTRALIZE, FLUSH AND DISPENSE. DO NOT DISPOSE OF WASTE WITH NORMAL GARBAGE OR TO SEWER SYSTEMS.

METHOD OF DISPOSAL: DISPOSE IN ACCORDANCE WITH FEDERAL, PROVINCIAL AND LOCAL HAZARDOUS WASTE LAWS.

SECTION 14: TRANSPORTATION INFORMATION

PROPER SHIPPING NAME: HYPOCHLORITE SOLUTION

TDG CLASSIFICATION: CLASS 8, UN1791, PACKING GROUP III

SECTION 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION: CLASS C, CLASS E, CORROSIVE MATERIAL

SECTION 16: OTHER INFORMATION

LEGEND:	ACGIH	AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
	AFFF	AQUEOUS FILM FORMING FOAM
	CAS #	CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER
	IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
	LC	LETHAL CONCENTRATION
	LD	LETHAL DOSE
	MSHA	MINE SAFETY AND HEALTH ADMINISTRATION
	N/AP.	NOT APPLICABLE
	N/AV.	NOT AVAILABLE
	NIOSH	NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
	NTP	NATIONAL TOXICOLOGY PROGRAM
	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
	TDG	TRANSPORTATION OF DANGEROUS GOODS ACT/REGULATIONS
	TLV	THRESHOLD LIMIT VALUE
	WHMIS	WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM

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