



# KENCRO

## CHEMICALS

HYDROCHLORIC ACID

### MATERIAL SAFETY DATA SHEET

#### SECTION 1: PRODUCT AND COMPANY INFORMATION

**PRODUCT IDENTIFIER:** HYDROCHLORIC ACID  
**PRODUCT USE:** ACIDIZING (ACTIVATION) OF PETROLEUM WELLS, FOOD INDUSTRY, SCALE REMOVAL, METAL CLEANING, PH ADJUSTMENT, INDUSTRIAL ACIDIZING  
**CHEMICAL FAMILY:** INORGANIC ACID  
**SUPPLIER'S NAME AND ADDRESS:** KENCRO CHEMICALS LIMITED  
2192 WYECROFT RD.  
OAKVILLE, ON  
L6L 6R1  
905-827-4133  
**24 HR. EMERGENCY NUMBER:** 613-996-6666 (CANUTEC)

#### SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	C.A.S. #	WT.%	LC50	LD50
HYDROGEN CHLORIDE	7647-01-0	10 - 36.9	N/AV.	N/AV.
WATER	7732-18-5	63.1 - 90	---	---

#### SECTION 3: HAZARDS IDENTIFICATION

##### EMERGENCY OVERVIEW

COLOURLESS TO LIGHT YELLOW LIQUID, PUNGENT ODOUR  
DANGER! CORROSIVE LIQUID. INHALATION OF VAPOURS OR EXTENDED CONTACT WITH LIQUID CAN CAUSE DAMAGE TO EYE, SKIN AND/OR RESPIRATORY TISSUE. THE SEVERITY OF DAMAGE DEPENDS ON THE CONCENTRATION OF THE ACID AND THE DURATION OF EXPOSURE.  
DO NOT BREATHE VAPOUR OF MIST. DO NOT GET IN EYES OR ON SKIN OR CLOTHING. USE ONLY WITH ADEQUATE VENTILATION. KEEP CONTAINER TIGHTLY CLOSED AND SEALED UNTIL READY FOR USE. WASH THOROUGHLY AFTER HANDLING. MATERIAL IS NON-FLAMMABLE. CONTACT WITH MOST METALS WILL GENERATE FLAMMABLE, POTENTIALLY EXPLOSIVE HYDROGEN GAS. A MODEST AMOUNT OF HEAT MAY EVOLVE WHEN MIXED WITH WATER.

##### POTENTIAL ACUTE HEALTH EFFECTS:

**SKIN CONTACT:** **CORROSIVE!** CONCENTRATED SOLUTIONS MAY CAUSE PAIN AND DEEP AND SEVERE BURNS TO THE SKIN. PROLONGED AND REPEATED EXPOSURE TO DILUTE SOLUTION OFTEN CAUSES IRRITATION, REDNESS, PAIN, DRYING AND CRACKING OF THE SKIN. EFFECTS RANGE FROM DERMATITIS, REDNESS, SWELLING, PAIN, AND PERMANENT SCARRING, TO DEATH.

**SKIN ABSORPTION:** N/AV.

**EYE CONTACT:** EXTREMELY CORROSIVE. LOW CONCENTRATIONS OF MISTS OR VAPORS (10-35PPM) CAN BE IRRITATING, CAUSING REDNESS. CONCENTRATED MISTS, VAPOURS OR SPLASHED LIQUID CAN CAUSE SEVERE IRRITATION, BURNS AND POSSIBLY PERMANENT BLINDNESS. THIS PRODUCT CAUSES CORNEAL SCARRING AND CLOUDING, GLAUCOMA AND CATARACTS.

**INHALATION:** CORROSIVE. INHALATION OF ACID AEROSOLS INCLUDING MISTS, VAPOURS, GAS, FOG, AND OTHER AIRBORNE FORMS OF ANY PARTICLE SIZE CAUSES IRRITATION OF THE NOSE, THROAT, AND RESPIRATORY TRACT WITH COUGHING AND DISCOMFORT. HIGHER OR PROLONGED INHALATION EXPOSURE MAY LEAD TO CORROSION OF MUCUS MEMBRANES WITH TEMPORARY LUNG IRRITATION AND COUGH, DIFFICULTY IN BREATHING, SHORTNESS OF BREATH AND/OR PULMONARY EDEMA (FLUID ACCUMULATION IN THE LUNGS). PROLONGED INHALATION MAY LEAD TO DENTAL EROSION.

INGESTION: CORROSIVE. INGESTION MAY CAUSE SEVERE ACID BURNS TO THE MOUTH, THROAT, ESOPHAGUS, AND STOMACH. SYMPTOMS MAY INCLUDE DIFFICULTY IN SWALLOWING, INTENSE THIRST, NAUSEA, VOMITING, DIARRHEA AND IN SEVERE CASES, COLLAPSE AND DEATH.

POTENTIAL OVER-EXPOSURE SIGNS/SYMPTOMS: ADVERSE SYMPTOMS OF INHALATION MAY INCLUDE RESPIRATORY TRACT IRRITATION AND COUGHING. SEVERE EXPOSURES (E.G. 1000-2000PPM), FOR EVEN A FEW MINUTES, CAN CAUSE A LIFE THREATENING ACCUMULATION OF FLUID IN THE LUNGS. INGESTION MAY LEAD TO STOMACH PAINS. OVER-EXPOSURE TO THE SKIN MAY LEAD TO PAIN, IRRITATION, REDNESS AND BLISTERING. OVER-EXPOSURE TO THE EYES MAY INCLUDE PAIN, WATERING AND REDNESS.

**SECTION 4: FIRST AID MEASURES**

**GENERAL:** CORROSIVE EFFECTS ON THE SKIN AND EYES MAY BE DELAYED AND DAMAGE MAY OCCUR WITHOUT THE SENSATION OR ONSET OF PAIN. STRICT ADHERENCE TO FIRST AID MEASURES FOLLOWING ANY EXPOSURE IS ESSENTIAL. SPEED IS ESSENTIAL. OBTAIN IMMEDIATE MEDICAL ATTENTION.

**INHALATION:** MOVE EXPOSED PERSON TO FRESH AIR. IF NOT BREATHING, IF BREATHING IS IRREGULAR OR IF RESPIRATORY ARREST OCCURS, PROVIDE ARTIFICIAL RESPIRATION OR OXYGEN BY TRAINED PERSONNEL. DO NOT USE MOUTH-TO-MOUTH METHOD 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 PROPER RESPIRATORY MEDICAL DEVICE. CALL MEDICAL DOCTOR OR POISON CONTROL CENTER IMMEDIATELY. SYMPTOMS MAY APPEAR UP TO 48 HOURS AFTER EXPOSURE.

**SKIN CONTACT:** IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 20 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. IF IRRITATION PERSISTS, REPEAT FLUSHING. GET MEDICAL ATTENTION IMMEDIATELY. DO NOT TRANSPORT VICTIM UNLESS THE RECOMMENDED FLUSHING PERIOD IS COMPLETED OR FLUSHING CAN BE CONTINUED DURING TRANSPORT.

**EYE CONTACT:** IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 20 MINUTES, OCCASIONALLY LIFTING THE UPPER AND LOWER EYELIDS. IF IRRITATION PERSISTS, REPEAT FLUSHING. GET MEDICAL ATTENTION IMMEDIATELY. DO NOT TRANSPORT VICTIM UNLESS THE RECOMMENDED FLUSHING PERIOD IS COMPLETED OR FLUSHING CAN BE CONTINUED DURING TRANSPORT.

**INGESTION:** WASH OUT MOUTH WITH WATER. DO NOT INDUCE VOMITING UNLESS DIRECTED TO DO SO BY MEDICAL PERSONNEL. IF SPONTANEOUS VOMITING OCCURS, HAVE VICTIM LEAN FORWARD WITH HEAD DOWN TO AVOID BREATHING IN OF VOMITUS, RINSE MOUTH AND ADMINISTER MORE WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION IMMEDIATELY.

**NOTES TO PHYSICIAN:** THIS PRODUCT CONTAINS MATERIAL THAT MAY CAUSE SEVERE PNEUMONITIS IF ASPIRATED. IF INGESTION HAS OCCURRED LESS THAN 2 HOURS EARLIER, CARRY OUT CAREFUL GASTRIC LAVAGE; USE ENDOTRACHEAL CUFF IF AVAILABLE, TO PREVENT ASPIRATION. OBSERVE PATIENT FOR RESPIRATORY DIFFICULTY FROM ASPIRATION PNEUMONITIS. GIVE ARTIFICIAL RESUSCITATION AND APPROPRIATE CHEMOTHERAPY IF RESPIRATION IS DEPRESSED. FOLLOWING EXPOSURE, THE PATIENT SHOULD BE KEPT UNDER MEDICAL REVIEW FOR AT LEAST 48 HOURS AS DELAYED PNEUMONITIS MAY OCCUR. DO NOT ATTEMPT TO NEUTRALIZE THE ACID WITH WEAK BASES SINCE THE REACTION WILL PRODUCE HEAT THAT MAY EXTEND THE CORROSIVE INJURY.

**SECTION 5: FIRE FIGHTING MEASURES**

**FIRE HAZARDS/CONDITION OF FLAMMABILITY:** NON-FLAMMABLE. ATTACKS MANY METALS PRODUCING EXTREMELY FLAMMABLE HYDROGEN GAS WHICH CAN FORM EXPLOSIVE MIXTURES WITH AIR. HYDROCHLORIC ACID FUMES MAY BE RELEASED FROM HEATING UNDER FIRE CONDITIONS. DECOMPOSITION PRODUCTS MAY INCLUDE THE FOLLOWING MATERIALS: HALOGENATED COMPOUNDS.

<b>FLASH POINT:</b>	N/AP.	<b>AUTO IGNITION TEMPERATURE:</b>	N/AP.
<b>FLASH POINT METHOD:</b>	N/AP.	<b>UPPER FLAMMABLE LIMIT:</b>	N/AP.
<b>LOWER FLAMMABLE LIMIT:</b>	N/AP.	<b>(% BY VOL.)</b>	
<b>OXIDIZING PROPERTIES:</b>	N/AP.		
<b>FLAME PROJECTION LENGTH:</b>	N/AP.		

**EXPLOSION DATA: SENSITIVITY TO MECHANICAL IMPACT/STATIC DISCHARGE:** NOT EXPECTED TO BE SENSITIVE TO STATIC DISCHARGE OR MECHANICAL IMPACT.

**SUITABLE EXTINGUISHING MEDIA:** USE AN EXTINGUISHING AGENT SUITABLE FOR THE SURROUNDING FIRE. USE CARBON DIOXIDE OR DRY CHEMICAL MEDIA FOR SMALL FIRES. IF ONLY WATER IS AVAILABLE,

USE IT IN THE FORM OF A FOG. FOR LARGE FIRES, USE EXTINGUISHING AGENTS COMPATIBLE WITH ACID AND APPROPRIATE FOR THE BURNING MATERIAL. AN ALL PURPOSE TYPE AFFF FOAM MAY BE USED 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:**

FIRE-FIGHTERS SHOULD WEAR APPROPRIATE PROTECTIVE EQUIPMENT AND SELF-CONTAINED BREATHING APPARATUS (SCBA) WITH A FULL FACE-PIECE OPERATED IN POSITIVE PRESSURE MODE.

**HAZARDOUS COMBUSTION PRODUCTS:**

HYDROGEN AND CHLORINE.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**LEAK AND SPILL PROCEDURES:**

PERSONAL PRECAUTIONS: DO NOT BREATHE VAPOUR OR MIST. PROVIDE ADEQUATE VENTILATION. WEAR APPROPRIATE RESPIRATOR WHEN VENTILATION IS INADEQUATE. PUT ON APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT. REMOVE ALL IGNITION SOURCES (NO SMOKING, FLARES, SPARKS OR FLAMES). COVER WITH DRY EARTH, SAND, OR OTHER NON-COMBUSTIBLE MATERIAL. ENVIRONMENTAL PRECAUTIONS; AVOID DISPERSAL OF SPILLED MATERIAL AND RUNOFF AND CONTACT WITH SOIL, WATERWAYS, DRAINS AND SEWERS. INFORM THE RELEVANT AUTHORITIES IF THE PRODUCT HAS CAUSED ENVIRONMENTAL POLLUTION (SEWERS, WATERWAYS, SOIL OR AIR).

**SECTION 7: HANDLING AND STORAGE**

**SAFE HANDLING PROCEDURES:**

PUT ON APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (SEE SECTION 8). EATING, DRINKING, AND SMOKING SHOULD BE PROHIBITED IN AREAS WHERE THIS MATERIAL IS HANDLED, STORED, AND PROCESSED. PREVENT RELEASE OF VAPOUR OR MIST IN HANDLING AREAS. LOCATE SAFETY SHOWER AND EYE WASH STATION. WORKERS SHOULD WASH HANDS AND FACE BEFORE EATING, DRINKING AND SMOKING. DO NOT GET IN EYES OR ON SKIN OR CLOTHING. DO NOT BREATHE VAPOUR OR MIST. DO NOT INGEST. USE ONLY WITH ADEQUATE VENTILATION. USE EXTREME CARE WHEN DILUTING WITH WATER. ALWAYS ADD ACID TO WATER. WEAR APPROPRIATE RESPIRATOR WHEN VENTILATION IS INADEQUATE. KEEP IN THE ORIGINAL CONTAINER OR AN APPROVED ALTERNATIVE MADE FROM A COMPATIBLE MATERIAL, KEPT TIGHTLY CLOSED WHEN NOT IN USE. KEEP AWAY FROM ALKALIS. EMPTY CONTAINERS RETAIN PRODUCT RESIDUE AND CAN BE HAZARDOUS. DO NOT REUSE CONTAINER.

**STORAGE REQUIREMENTS:**

STORE IN ACCORDANCE WITH LOCAL REGULATIONS. STORE IN ORIGINAL CONTAINER PROTECTED FROM DIRECT SUNLIGHT IN A DRY, COOL AND WELL-VENTILATED AREA, AWAY FROM INCOMPATIBLE MATERIALS (SEE SECTION 10) AND FOOD AND DRINK. SEPARATE FROM ALKALIS. KEEP CONTAINER TIGHTLY CLOSED AND SEALED UNTIL READY FOR USE. CONTAINERS THAT HAVE BEEN OPENED MUST BE CAREFULLY RESEALED AND KEPT UPRIGHT TO PREVENT LEAKAGE. DO NOT STORE IN UNLABELED CONTAINERS. USE APPROPRIATE CONTAINMENT TO AVOID ENVIRONMENTAL CONTAMINATION. STORAGE TANKS SHOULD BE ABOVE GROUND AND SURROUNDED WITH DIKES CAPABLE OF HOLDING ENTIRE CONTENTS. IDEAL STORAGE TEMPERATURE IS 10-27°C. DO NOT EXPOSE SEALED CONTAINERS TO TEMPERATURES ABOVE 40°C.

**INCOMPATIBLE MATERIALS:**

OXIDIZING MATERIALS, REDUCING MATERIALS AND STRONG BASES. HIGHLY REACTIVE WITH METALS. HYDROXIDES, AMINES, SULFIDES, CARBONATES, HYPOCHLORITES, FORMALDEHYDE AND ALKALIS ARE ALSO INCOMPATIBLE MATERIALS.

**SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION**

EXPOSURE LIMITS			
INGREDIENTS	TWA	STEL (15 MINS)	PEL
HYDROGEN CHLORIDE	N/AV.	2 PPM	N/AV.

SEE COMPOSITION/INFORMATION ON INGREDIENTS, SECTION 2.

**ENGINEERING CONTROLS:**

USE ONLY WITH ADEQUATE VENTILATION. USE PROCESS ENCLOSURES, LOCAL EXHAUST VENTILATION OR OTHER ENGINEERING CONTROLS TO KEEP WORKER

EXPOSURE TO AIRBORNE CONTAMINANTS BELOW ANY RECOMMENDED OR STATUTORY LIMITS. THE ENGINEERING CONTROLS ALSO NEED TO KEEP GAS, VAPOUR OR DUST CONCENTRATIONS BELOW ANY LOWER EXPLOSIVE LIMITS. ELECTRICAL INSTALLATIONS SHOULD BE PROTECTED AGAINST THE CORROSIVE ACTION OF VAPOURS. SMOKING SHOULD BE PROHIBITED IN AREAS IN WHICH HYDROCHLORIC ACID IS STORED OR HANDLED.

<b>GLOVES/TYPE:</b>	CHEMICAL-RESISTANT, IMPERVIOUS GLOVES COMPLYING WITH AN APPROVED STANDARD SHOULD BE WORN AT ALL TIMES WHEN HANDLING CHEMICAL PRODUCTS IF A RISK ASSESSMENT INDICATES THIS IS NECESSARY, >8 HOURS (BREAKTHROUGH TIME): NITRILE GLOVES.
<b>RESPIRATORY/TYPE:</b>	A NIOSH/MSHA APPROVED AIR-PURIFYING RESPIRATOR EQUIPPED WITH ACID GAS CARTRIDGES UP TO TEN TIMES THE TLV. RESPIRATOR SELECTION MUST BE BASED ON KNOWN OR ANTICIPATED EXPOSURE LEVELS, THE HAZARDS OF THE PRODUCT AND THE SAFE WORKING LIMITS OF THE SELECTED RESPIRATOR. RECOMMENDED: VAPOUR RESPIRATOR.
<b>EYE/TYPE:</b>	SAFETY EYEWEAR COMPLYING WITH AN APPROVED STANDARD SHOULD BE USED WHEN A RISK ASSESSMENT INDICATES THIS IS NECESSARY TO AVOID EXPOSURE TO LIQUID SPLASHES, MISTS OR DUSTS. RECOMMENDED: SPLASH GOGGLES WITH FULL FACE SHIELD. MAINTAIN EYE WASH STATION AND QUICK DRENCH FACILITIES IN WORK AREA.
<b>FOOTWEAR/TYPE:</b>	BOOTS
<b>CLOTHING/TYPE:</b>	PROTECTIVE CLOTHING MADE FROM NEOPRENE SHOULD BE IMPERVIOUS UNDER CONDITIONS OF USE, INCLUDING BOOTS, GLOVES, LAB COAT, APRON OR FULL BODY SUIT, AS APPROPRIATE, TO PREVENT SKIN CONTACT.
<b>OTHER/TYPE:</b>	EMISSIONS FROM VENTILATION OR WORK PROCESS EQUIPMENT SHOULD BE CHECKED TO ENSURE THEY COMPLY WITH THE REQUIREMENTS OF ENVIRONMENTAL PROTECTION LEGISLATION. IN SOME CASES, FUME SCRUBBERS, FILTERS OR ENGINEERING MODIFICATIONS TO THE PROCESS EQUIPMENT WILL BE NECESSARY TO REDUCE EMISSIONS TO ACCEPTABLE LEVELS.

#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>PHYSICAL STATE:</b>	LIQUID	<b>APPEARANCE:</b>	COLOURLESS TO LIGHT YELLOW
<b>ODOUR:</b>	PUNGENT	<b>ODOUR THRESHOLD:</b>	N/AV.
<b>PH:</b>	<1	<b>BOILING POINT:</b>	84°C(183.2°F)
<b>SPECIFIC GRAVITY:</b>	1.18 G/CM <sup>3</sup> [22°C(71.6°F)]	<b>MELTING/FREEZING POINT:</b>	-62.5°C(-80.5°F)
<b>COEFFICIENT OF WATER/OIL DISTRIBUTION:</b>	N/AV.	<b>SOLUBILITY IN WATER:</b>	COMPLETELY SOLUBLE
<b>EVAPOURATION RATE:</b>	>1 (BUTYL ACETATE = 1)	<b>RELATIVE DENSITY:</b>	1.16
<b>VOLATILITY:</b>	100%	<b>VAPOUR PRESSURE (mmHg):</b>	35
<b>MOLECULAR WEIGHT:</b>	36.46		
<b>MOLECULAR FORMULA:</b>	HCL		

#### SECTION 10: REACTIVITY AND STABILITY DATA

<b>STABILITY AND REACTIVITY:</b>	STABLE UNDER NORMAL CONDITIONS OF USE.
<b>CONDITIONS TO AVOID:</b>	ELEVATED TEMPERATURES. KEEP AWAY FROM FLAME, SPARKS AND OTHER IGNITION SOURCES. TAKE ANY PRECAUTION TO AVOID MIXING WITH INCOMPATIBLES.
<b>HAZARDOUS DECOMPOSITION PRODUCTS:</b>	UNDER NORMAL CONDITIONS OF STORAGE AND USE, HAZARDOUS DECOMPOSITION PRODUCTS SHOULD NOT BE PRODUCED. WHEN HEATED TO DECOMPOSITION, EMITS TOXIC HYDROGEN CHLORIDE FUMES. THERMAL OXIDATIVE DECOMPOSITION PRODUCES TOXIC CHLORINE FUMES AND EXPLOSIVE HYDROGEN GAS.

#### SECTION 11: TOXICOLOGICAL INFORMATION

<b>TOXICOLOGICAL DATA:</b>	NO SPECIFIC DATA.
<b>CARCINOGENIC STATUS:</b>	
<b>REPRODUCTIVE EFFECTS:</b>	N/AV.
<b>TERATOGENICITY:</b>	N/AV.
<b>MUTAGENICITY:</b>	N/AV.
<b>SENSITIZATION TO MATERIAL:</b>	SEE ROUTE OF ENTRY: SKIN CONTACT.
<b>SYNERGISTIC MATERIALS:</b>	N/AV.

**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:**

REPEATED EXPOSURE TO LOW CONCENTRATIONS OF ACID MIST OR VAPOUR MAY CAUSE REDNESS, SWELLING AND PAIN (DERMATITIS). EXPOSURE TO LOW CONCENTRATION OF ACID MIST OR VAPOUR BY INHALATION MAY CAUSE BLEEDING OF NOSE AND GUMS, BRONCHITIS, STOMACH PAIN (GASTRITIS), AND BROWNISH DISCOLOURATION AND DAMAGE TO TOOTH ENAMEL. DENTAL EROSION BECOMES MORE SEVERE WITH INCREASED EXPOSURE.

**SECTION 12: ECOLOGICAL INFORMATION**

**ENVIRONMENTAL EFFECTS:**

THE 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:**

MATERIAL IS EXTREMELY TOXIC TO AQUATIC LIFE ON AN ACUTE BASIS.

ACUTE LC50 282000 ug/L	FISH	96 HOURS EXPOSURE
ACUTE LC50 240000 ug/L	CRUSTACEANS	48 HOURS EXPOSURE

**SECTION 13: DISPOSAL CONSIDERATIONS**

**HANDLING FOR DISPOSAL:** THE GENERATION OF WASTE SHOULD BE AVOIDED OR MINIMIZED WHEREVER POSSIBLE. THIS MATERIAL AND ITS CONTAINER MUST BE DISPOSED OF IN A SAFE WAY. AVOID DISPERSAL OF SPILLED MATERIAL AND RUNOFF AND CONTACT WITH SOIL, WATERWAYS, DRAINS AND SEWERS. EMPTY CONTAINERS OR LINERS MAY RETAIN SOME PRODUCT RESIDUES. DIPOSE OF SURPLUS AND NON-RECYCLABLE PRODUCTS VIA A LICENSED WASTE DISPOSAL CONTRACTOR.

**METHOD OF DISPOSAL:** DISPOSAL SHOULD BE IN ACCORDANCE WITH APPLICABLE REGIONAL, NATIONAL AND LOCAL LAWS AND REGULATIONS.

**SECTION 14: TRANSPORTATION INFORMATION**

**PROPER SHIPPING NAME:** HYDROCHLORIC ACID

**TDG CLASSIFICATION:** UN1789, HYDROCHLORIC ACID, CLASS 8, PACKAGING GROUP II

**SECTION 15: REGULATORY INFORMATION**

**WHMIS CLASSIFICATION:** CLASS E: CORROSIVE MATERIAL

**SECTION 16: OTHER INFORMATION**

<b>LEGEND:</b>	AFFF	AQUEOUS FILM FORMING FOAM
	CAS #	CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER
	LC	LETHAL CONCENTRATION
	MSHA	MINE SAFETY AND HEALTH ADMINISTRATION
	N/AP.	NOT APPLICABLE
	N/AV.	NOT AVAILABLE
	NIOSH	NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
	PEL	PERMISSIBLE EXPOSURE LIMIT
	SCBA	SELF CONTAINED BREATHING APPARATUS
	STEL	SHORT TERM EXPOSURE LIMIT
	TDG	TRANSPORTATION OF DANGEROUS GOODS ACT/REGULATIONS
	TLV	THRESHOLD LIMIT VALUE
	TWA	TIME WEIGHTED AVERAGE
	WHMIS	WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM

**PREPARED BY:** KENCRO CHEMICALS LIMITED

TEL: 905-827-4133

FAX: 905-827-4145

**MSDS PREPARATION DATE:** JUNE 1, 2014

**DISCLAIMER OF LIABILITY**

THE INFORMATION IS, TO THE BEST OF OUR KNOWLEDGE AND BELIEF, ACCURATE AND RELIABLE AS OF THE DATE COMPILED. HOWEVER, NO REPRESENTATION, WARRANTY OR GUARANTEE IS MADE TO ITS ACCURACY, RELIABILITY OR COMPLETENESS. IT IS THE USER'S RESPONSIBILITY TO REVIEW THIS INFORMATION, SATISFY THEMSELVES AS TO ITS SUITABILITY AND COMPLETENESS AND PASS ON THE INFORMATION TO ITS EMPLOYEES AND CUSTOMERS. KENCRO CHEMICALS LIMITED DOES NOT ACCEPT RESPONSIBILITY FOR ANY LOSS OR DAMAGE WHICH MAY OCCUR FROM THE USE OF THIS INFORMATION.

winword\msds\HydrochloricAcid2014