

HYDROCHLORIC ACID

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: HAZARDS IDENTIFICATION

CLASSIFICATION OF THE CHEMICAL

COLOURLESS TO LIGHT YELLOW, FUMING LIQUID. PUNGENT ODOR

THIS MATERIAL IS CLASSIFIED AS HAZARDOUS UNDER U.S. OSHA REGULATIONS (29CFR 1910.1200)(HAZCOM 2012) AND CANADIAN WHMIS REGULATIONS (HAZARDOUS PRODUCTS REGULATIONS) (WHMIS 2015).

HAZARD CLASSIFICATION:

CORROSIVE TO METALS: CATEGORY 1

ACUTE TOXICITY, ORAL: CATEGORY 4

ACUTE TOXICITY, INHALATION: CATEGORY 4 (MIST)

EYE DAMAGE/IRRITATION: CATEGORY 1

SKIN CORROSION/IRRITATION: CATEGORY 1

SPECIFIC TARGET ORGAN, SINGLE EXPOSURE: CATEGORY 3

LABEL ELEMENTS

HAZARD PICTOGRAMS



SIGNAL WORD

DANGER!

HAZARD STATEMENT

MAY BE CORROSIVE TO METALS

HARMFUL IF SWALLOWED

HARMFUL IF INHALED

CAUSES SEVERE BURNS AND EYE DAMAGE

MAY CAUSE RESPIRATORY IRRITATION

PRECAUTIONARY STATEMENTS

KEEP ONLY IN ORIGINAL CONTAINER

WASH THOROUGHLY AFTER HANDLING

DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT

DO NOT BREATHE MISTS

USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA

WEAR PROTECTIVE GLOVES/CLOTHING AND EYE/FACE PROTECTION

IF SWALLOWED: RINSE MOUTH. DO NOT INDUCE VOMITING.

IF ON SKIN (OR HAIR): TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH WATER/SHOWER.

WASH CONTAMINATED CLOTHING BEFORE REUSE.

IF INHALED: REMOVE PERSON TO FRESH AIR.

IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND EASY TO DO. CONTINUE RINSING

IMMEDIATELY CALL A POISON CENTRE OR DOCTOR/PHYSICIAN.

ABSORB SPILLAGE TO PREVENT MATERIAL DAMAGE.

STORE IN CORROSION RESISTANT CONTAINER WITH A RESISTANT INNER LINER.

STORE LOCKED UP

STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED.

DISPOSE OF CONTENTS/CONTAINER IN ACCORDANCE WITH LOCAL/REGIONAL/NATIONAL/INTERNATIONAL REGULATIONS.

OTHER HAZARDS

OTHER HAZARDS WHICH DO NOT RESULT IN CLASSIFICATION:

CONTACT WITH METALS MAY RELEASE SMALL AMOUNTS OF FLAMMABLE HYDROGEN GAS.

INGESTION MAY CAUSE SEVERE IRRITATION TO THE MOUTH, THROAT AND STOMACH. PROLONGED SKIN CONTACT MAY CAUSE DERMATITIS (RASH), CHARACTERIZED BY RED, DRY, ITCHING SKIN. PROLONGED OR REPEATED INHALATION OF FUMES OR VAPOURS MAY CAUSE CHRONIC LUNG EFFECTS, SUCH AS BRONCHITIS, AND TOOTH ENAMEL EROSION. CHRONIC SKIN CONTACT WITH LOW CONCENTRATIONS MAY CAUSE DERMATITIS.

SECTION 3: 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 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.

FLASH POINT: N/AP.

FLASH POINT METHOD: N/AP.

LOWER FLAMMABLE LIMIT: N/AP.

(% BY VOL.)

OXIDIZING PROPERTIES: N/AP.

FLAME PROJECTION LENGTH: 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	ACGIH TLV		OSHA PEL	
INGREDIENTS	TWA	STEL	PEL	STEL
HYDROGEN CHLORIDE	2 PPM	N/A	5PPM; 7mg/m3	N/A

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.

GLOVES/TYPE:

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.

RESPIRATORY/TYPE:

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. 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.

EYE/TYPE:

FOOTWEAR/TYPE: CLOTHING/TYPE:

BOOTS
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.

OTHER/TYPE:

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

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

SECTION 10: REACTIVITY AND STABILITY DATA

STABILITY AND REACTIVITY:

STABLE UNDER THE RECOMMENDED STORAGE AND HANDLING CONDITIONS PRESCRIBED. REACTS VIOLENTLY WITH A WIDE VARIETY OF ORGANIC AND INORGANIC CHEMICALS INCLUDING ALCOHOLS, CARBIDES, CHLORATES, PICRATES, NITRATES AND METALS. CONTACT WITH METALS MAY RELEASE SMALL AMOUNTS OF FLAMMABLE HYDROGEN GAS. CORROSIVE IN CONTACT WITH METALS.

POSSIBILITY OF HAZARDOUS REACTIONS:

HAZARDOUS POLYMERIZATION DOES NOT OCCUR. CONTACT WITH METALS MAY RELEASE SMALL AMOUNTS OF FLAMMABLE HYDROGEN GAS.

CONDITIONS TO AVOID:

AVOID HEAT AND OPEN FLAME. ENSURE ADEQUATE VENTILATION, ESPECIALLY IN CONFINED AREAS. AVOID CONTACT WITH INCOMPATIBLE MATERIALS

HAZARDOUS DECOMPOSITION PRODUCTS:

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

INFORMATION ON LIKELY ROUTES OF EXPOSURE:

ROUTES OF ENTRY INHALATION: YES
ROUTES OF ENTRY SKIN AND EYE: YES
ROUTES OF INGESTION: YES
ROUTES OF EXPOSURE SKIN ABSORPTION: YES

POTENTIAL HEALTH EFFECTS:

SIGNS AND SYMPTOMS OF SHORT-TERM (ACUTE) EXPOSURE

SIGN AND SYMPTOMS INHALATION

HARMFUL IF INHALED. INHALATION OF HIGH CONCENTRATIONS OF FUMES OR MISTS MAY CAUSE SEVERE IRRITATION AND CORROSIVE DAMAGE TO THE NOSE, THROAT AND UPPER RESPIRATORY TRACT. SYMPTOMS MAY INCLUDE COUGHING, CHOKING AND WHEEZING. COULD RESULT IN PULMONARY EDEMA (FLUID ACCUMULATION). SYMPTOMS OF PULMONARY EDEMA (CHEST PAIN, SHORTNESS OF BREATH) MAY BE DELAYED.

SIGN AND SYMPTOMS INGESTION

HARMFUL IF SWALLOWED. MAY CAUSE SEVERE IRRITATION AND CORROSIVE DAMAGE IN THE MOUTH, THROAT AND STOMACH. SYMPTOMS MAY INCLUDE ABDOMINAL PAIN, VOMITING, BURNS, PERFORATIONS, BLEEDING AND EVENTUALLY DEATH.

SIGN AND SYMPTOMS SKIN :

CAUSES SKIN BURNS. SYMPTOMS MAY INCLUDE REDNESS, BLISTERING, PAIN AND SWELLING.

SIGN AND SYMPTOMS EYES :

CAUSES SERIOUS EYE DAMAGE. PERMANENT EYE DAMAGE INCLUDING BLINDNESS COULD RESULT. SYMPTOMS MAY INCLUDE SEVERE PAIN, TEARING, REDNESS, SWELLING AND BLURRED VISION.

POTENTIAL CHRONIC HEALTH EFFECTS

CHRONIC SKIN CONTACT WITH LOW CONCENTRATIONS MAY CAUSE DERMATITIS. PROLONGED OR REPEATED INHALATION OF FUMES OR VAPOURS, MAY CAUSE CHRONIC LUNG EFFECTS, SUCH AS BRONCHITIS, AND TOOTH ENAMEL EROSION.

MUTAGENICITY : NOT EXPECTED TO BE MUTAGENIC IN HUMANS.

CARCINOGENICITY : NO COMPONENTS ARE LISTED AS CARCINOGENS BY ACGIH, IARC, OSHA OR NTP.

REPRODUCTIVE EFFECTS & TERATOGENICITY : NOT EXPECTED TO CAUSE REPRODUCTIVE EFFECTS.

SENSITIZATION TO MATERIAL : NOT EXPECTED TO BE A SKIN OR RESPIRATORY SENSITIZER.

SPECIFIC TARGET ORGAN EFFECTS : TARGET ORGANS:: EYES, SKIN, RESPIRATORY SYSTEM AND DIGESTIVE SYSTEM.

THIS MATERIAL IS CLASSIFIED AS HAZARDOUS UNDER CANADIAN WHMIS REGULATIONS (HAZARDOUS PRODUCTS REGULATIONS) (WHMIS 2015). CLASSIFICATION: SPECIFIC TARGET ORGAN TOXICITY, SINGLE EXPOSURE -CATEGORY 3
MAY CAUSE RESPIRATORY IRRITATION.

THE SUBSTANCE OR MIXTURE IS NOT CLASSIFIED AS SPECIFIC TARGET ORGAN TOXICANT, REPEATED EXPOSURE.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: PRE-EXISTING SKIN, EYE AND RESPIRATORY DISORDERS.

SYNERGISTIC MATERIALS : NOT AVAILABLE.

TOXICOLOGICAL DATA :

THE CALCULATED ATE VALUES FOR THIS MIXTURE ARE:

ATE ORAL = 755.55 MG/KG

ATE INHALATION (MISTS) = 3.33 MG/L

CHEMICAL NAME	LC50(4HR) INH, RAT	LD50 (ORAL, RAT)	LD50 (RABBIT, DERMAL)
HYDROCHLORIC ACID	1.05 1.175 MG/L	238-277 MG/KG	5010 MG/KG

OTHER IMPORTANT TOXICOLOGICAL HAZARDS
: NONE KNOWN OR REPORTED BY THE MANUFACTURER.

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. DISPOSE 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, 49CFR/DOT, ICAO/IATA, IMDG CLASSIFICATIONS:

UN1789, HYDROCHLORIC ACID, CLASS 8, PACKAGING GROUP II

SECTION 15: REGULATORY INFORMATION

US FEDERAL INFORMATION: COMPONENTS LISTED BELOW ARE PRESENT ON THE FOLLOWING U.S. FEDERAL CHEMICAL LISTS:

INGREDIENTS	CAS #	TSCA INVENTORY	CERCLA REPORTABLE QUANTITY (RQ) (40 CFR 117.302)	SARA TITLE III: SEC. 302 EXTREMELY HAZARDOUS SUBSTANCE, 40 CFR 355	SARA TITLE III: SEC 313, 40 CFR	
					TOXIC CHEMICAL	DEMINIMUS CONCENTRATION
HYDROCHLORIC ACID	7647-01-0	YES	5000LB/2270KG	500LB TPQ (GAS ONLY)	YES	1%

SARA TITLE III: SEC. 311 AND 312, SDS REQUIREMENTS, 40 CFR 370 HAZARD CLASSES: ACUTE HEALTH HAZARD.

UNDER SARA SECTIONS 311 AND 312, THE EPA HAS ESTABLISHED THRESHOLD QUANTITIES FOR THE REPORTING OF HAZARDOUS CHEMICALS. THE CURRENT THRESHOLDS ARE 500 POUNDS OR THE THRESHOLD PLANNING QUANTITY (TPQ), WHICHEVER IS LOWER, FOR EXTREMELY HAZARDOUS SUBSTANCES AND 10,000 POUNDS FOR ALL OTHER HAZARDOUS CHEMICALS.

US STATE RIGHT TO KNOW LAWS:

THE FOLLOWING CHEMICALS ARE SPECIFICALLY LISTED BY INDIVIDUAL STATES:

INGREDIENTS	CAS #	CALIFORNIA PROPOSITION 65		STATE "RIGHT TO KNOW" LISTS					
		LISTED	TYPE OF TOXICITY	CA	MA	MN	NJ	PA	RI
HYDROCHLORIC ACID	7647-01-0	NO	N/AP	YES	YES	YES	YES	YES	YES

CANADIAN INFORMATION:

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) INFORMATION: ALL INGREDIENTS LISTED APPEAR ON THE DOMESTIC SUBSTANCES LIST (DSL).

WHMIS INFORMATION: REFER TO SECTION 2 FOR A WHMIS CLASSIFICATION FOR THIS PRODUCT.

INTERNATIONAL INFORMATION:

COMPONENTS LISTED BELOW ARE PRESENT ON THE FOLLOWING INTERNATIONAL INVENTORY LIST:

INGREDIENTS	CAS #	EUROPEAN EINECS	AUSTRALIA AICS	PHILIPPINES PICCS	JAPAN ENCS	KOREA KECI/KECL	CHINA IECS	NEW ZEALAND IOC
HYDROCHLORIC ACID	7647-01-0	231-595-7	PRESENT	PRESENT	(1)-215	KE-20189	PRESENT	HSR004090

SECTION 16: OTHER INFORMATION

LEGEND:	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
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MSDS PREPARATION DATE: JUNE 1, 2017

DISCLAIMER OF LIABILITY

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