



MURSATT CHEMICALS LIMITED
11 REGALCREST COURT
WOODBIDGE, ONTARIO, CANADA, L4L 8P3
(905)-850-8444

PRODUCT: MURIATIC ACID

CODE: MUR0051

SECTION 01: IDENTIFICATION

PRODUCT CODE..... MUR0051
 PRODUCT IDENTIFIER..... MURIATIC ACID
 OTHER MEANS OF IDENTIFICATION..... N.AV.
 RECOMMENDED USE AND PH ADJUSTMENT.
 RESTRICTIONS ON USE
 SUPPLIER IDENTIFIER..... MURSATT CHEMICALS LIMITED
 11 REGALCREST COURT
 WOODBRIDGE, ONTARIO
 CANADA
 L4L 8P3
 EMERGENCY PHONE NO..... CANUTEC (613)-996-6666.

SECTION 02: HAZARD IDENTIFICATION



HAZARD CLASSIFICATION..... CORROSIVE TO METALS - CATEGORY 1 . SKIN CORROSION - CATEGORY 1B.
 SERIOUS EYE DAMAGE - CATEGORY 1. SPECIFIC TARGET ORGAN TOXICITY -
 SINGLE EXPOSURE - CATEGORY 3 RESPIRATORY SYSTEM.
 SIGNAL WORD..... DANGER.
 HAZARD STATEMENT..... H290 MAY BE CORROSIVE TO METALS. H314 CAUSES SEVERE SKIN BURNS AND
 EYE DAMAGE. H335 MAY CAUSE RESPIRATORY IRRITATION.
 PRECAUTIONARY STATEMENT..... P234 KEEP ONLY IN ORIGINAL CONTAINER. P261 AVOID BREATHING
 DUST/FUME/GAS/MIST/VAPOURS/SPRAY. P264 WASH SKIN THOROUGHLY AFTER
 HANDLING. P271 USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA. P280
 WEAR PROTECTIVE GLOVES/PROTECTIVE CLOTHING/EYE PROTECTION/FACE
 PROTECTION. P301+P330+P331 IF SWALLOWED: RINSE MOUTH. DO NOT INDUCE
 VOMITING. P303+P361+P353 IF ON SKIN (OR HAIR): REMOVE/TAKE OFF
 IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH
 WATER/SHOWER. P304+P340+P310 IF INHALED: REMOVE VICTIM TO FRESH AIR
 AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING.
 IMMEDIATELY CALL A POISON CENTER OR DOCTOR/PHYSICIAN.
 P305+P351+P338+P310 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 CENTER OR
 DOCTOR/PHYSICIAN. P363 WASH CONTAMINATED CLOTHING BEFORE REUSE.
 P390 ABSORB SPILLAGE TO PREVENT MATERIAL DAMAGE. P403+P233 STORE IN A
 WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED. P405 STORE
 LOCKED UP. P501 DISPOSE OF CONTENTS/CONTAINER TO APPROPRIATE WASTE
 SITE OR RECLAIMER IN ACCORDANCE WITH LOCAL AND NATIONAL
 REGULATIONS.
 OTHER HAZARDS..... NONE.

SECTION 03: COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	CAS #	WT. %
HYDROGEN CHLORIDE	7647-01-0	10-36.9

SECTION 04: FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES:
 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.

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SECTION 04: FIRST AID MEASURES

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.
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.
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. SEE SECTION 11.
MOST IMPORTANT SYMPTOMS AND EFFECTS, ACUTE OR DELAYED: INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED	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 05: FIRE FIGHTING MEASURES

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.
UNSUITABLE EXTINGUISHING MEDIA..... SPECIAL HAZARDS ARISING FROM THE PRODUCT:	N.AV. 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. HYDROGEN AND CHLORINE.
HAZARDOUS COMBUSTION PRODUCTS. SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS:	FIRE-FIGHTERS SHOULD WEAR APPROPRIATE PROTECTIVE EQUIPMENT AND SELF-CONTAINED BREATHING APPARATUS (SCBA) WITH A FULL FACE-PIECE OPERATED IN POSITIVE PRESSURE MODE.

SECTION 06: ACCIDENTAL RELEASE MEASURES

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.
METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP	COLLECT INTO A SUITABLE CONTAINER FOR DISPOSAL.

SECTION 07: HANDLING AND STORAGE

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SECTION 07: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:..... 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.

CONDITIONS FOR SAFE STORAGE, STORE IN ACCORDANCE WITH LOCAL REGULATIONS. STORE IN ORIGINAL INCLUDING ANY INCOMPATIBILITIES: 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.

SECTION 08: EXPOSURE CONTROLS AND PERSONAL PROTECTION

INGREDIENTS	TWA	ACGIH TLV STEL	PEL	OSHA PEL STEL	REL	NIOSH
HYDROGEN CHLORIDE	N.A.V.	N.A.V.	N.A.V.	N.A.V.	N.A.V.	N.A.V.
APPROPRIATE 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.					
INDIVIDUAL PROTECTION MEASURE SUCH AS PERSONAL PROTECTIVE EQUIPMENTS:						
HAND PROTECTION.....	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 PROTECTION.....	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.					
EYE PROTECTION.....	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.					
PROTECTIVE CLOTHING.....	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.					
PROTECTIVE FOOTWEAR.....	BOOTS.					
OTHER.....	EYE BATH AND SAFETY SHOWER. 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.					
HYGIENIC PRACTICES.....	USE GOOD PERSONAL HYGIENE PRACTICES. WASH HANDS BEFORE EATING, DRINKING, OR SMOKING, OR USING TOILET FACILITIES. PROMPTLY REMOVE CONTAMINATED CLOTHING AND WASH THOROUGHLY BEFORE REUSE.					

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SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE.....	LIQUID.
COLOR.....	COLOURLESS TO LIGHT YELLOW.
ODOUR.....	PUNGENT ODOUR.
ODOUR THRESHOLD.....	N.AV.
PH.....	<1.
FREEZING POINT.....	-62.5 C (-80.5 F).
BOILING POINT.....	84 C (183.2 F).
FLASH POINT (C), METHOD.....	N.AP.
EVAPORATION RATE.....	>1 (BUTYL ACETATE = 1).
FLAMMABILITY (SOLIDS AND GASES).....	N.AV.
UPPER FLAMMABLE LIMIT (% BY VOL.)...	N.AP.
LOWER FLAMMABLE LIMIT (% BY VOL.)...	N.AP.
VAPOUR PRESSURE (MMHG).....	35.
VAPOUR DENSITY (AIR=1).....	N.AV.
RELATIVE DENSITY.....	1.16.
SOLUBILITY IN WATER (% W/W).....	COMPLETELY SOLUBLE.
COEFFICIENT OF WATER/OIL DIST.....	N.AV.
AUTO IGNITION TEMPERATURE.....	N.AP.
DECOMPOSITION TEMPERATURE.....	N.AV.
VISCOSITY.....	N.AV.

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY:.....	HAZARDOUS POLYMERISATION WILL NOT OCCUR.
CHEMICAL STABILITY:.....	STABLE UNDER NORMAL CONDITIONS OF USE.
POSSIBILITY OF HAZARDOUS REACTIONS:.....	SEE INCOMPATIBLE MATERIALS BELOW.
CONDITIONS TO AVOID.....	ELEVATED TEMPERATURES. KEEP AWAY FROM FLAME, SPARKS AND OTHER IGNITION SOURCES. TAKE ANY PRECAUTION TO AVOID MIXING WITH INCOMPATIBLES.
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.
HAZARDOUS PRODUCTS OF DECOMPOSITION.....	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

INGREDIENTS	LC50	LD50
HYDROGEN CHLORIDE	N.AV.	N.AV.
INFORMATION ON LIKELY ROUTES OF ENTRY:		
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.	

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SECTION 11: TOXICOLOGICAL INFORMATION

EFFECTS OF ACUTE EXPOSURE..... SEE ABOVE.
 EFFECTS OF CHRONIC EXPOSURE..... 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.

SIGNS AND SYMPTOMS OF ADVERSE SYMPTOMS OF INHALATION MAY INCLUDE RESPIRATORY TRACT
 OVEREXPOSURE 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.

CARCINOGENICITY OF MATERIAL..... IARC - GROUP 3 CARCINOGEN.
 TERATOGENICITY..... N.AV.
 MUTAGENICITY..... N.AV.
 REPRODUCTIVE EFFECTS..... N.AV.
 SENSITIZING CAPABILITY OF MATERIAL N.AV.
 SYNERGISTIC MATERIALS..... N.AV.

SECTION 12: ECOLOGICAL CONSIDERATIONS

ECOTOXICITY..... 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.

PERSISTENCE AND DEGRADATION..... N.AV.
 BIOACCUMULATIVE POTENTIAL..... N.AV.
 MOBILITY IN SOIL..... N.AV.
 OTHER ADVERSE EFFECTS..... N.AV.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS:..... DISPOSE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

SECTION 14: TRANSPORT INFORMATION

UN NUMBER..... 1789.
 PROPER SHIPPING NAME..... HYDROCHLORIC ACID.
 TDG CLASSIFICATION..... 8.
 PACKING GROUP..... II.
 ENVIRONMENTAL HAZARDS ACCORDING TO THE INTERNATIONAL MARITIME DANGEROUS GOODS CODE AND THE UNITED NATIONS MODEL REGULATIONS: N.AV.
 SPECIAL PRECAUTIONS IN CONNECTION WITH TRANSPORT OR CONVEYANCE EITHER WITHIN OR OUTSIDE THE PREMISES: N.AV.

SECTION 15: REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS SPECIFIC TO THE PRODUCT: N.AV.

SECTION 16: OTHER INFORMATION

N.AV.=NOT AVAILABLE
 N.AP.=NOT APPLICABLE

OTHER INFORMATION..... THE DATA IN THIS MSDS RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED HEREIN AND DOES NOT RELATE TO USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY PROCESS. THIS DATA IS OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS PRODUCT SPECIFICATIONS. NO WARRANTY, EITHER EXPRESSED OR IMPLIED, IS HEREBY MADE. THE RECOMMENDED INDUSTRIAL HYGIENE AND SAFE HANDLING PROCEDURES ARE BELIEVED TO BE GENERALLY APPLICABLE. HOWEVER, EACH USER SHOULD REVIEW THESE RECOMMENDATIONS IN THE SPECIFIC CONTEXT OF THE INTENDED USE AND DETERMINE WHETHER THEY ARE APPROPRIATE.

PREPARED BY..... REGULATORY AFFAIRS

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SECTION 16: OTHER INFORMATION

PREPARATION DATE..... APR 18/2017