

# ***Chem-Impex International Inc.***

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## **SAFETY DATA SHEET**

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### **SECTION 1. CHEMICAL IDENTIFICATION**

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CATALOG #:	01829
NAME:	Hydrochloric acid
SYNONYMS:	
24 HOUR EMERGENCY TELEPHONE:	(800) 535-5053(USA) 352-323-3500 (INTERNATIONAL)
TO REQUEST AN MSDS:	(800) 869-9290
CUSTOMER SERVICE:	(630) 766-2112

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### **SECTION 2. HAZARDS IDENTIFICATION**

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#### **CLASSIFICATION OF THE SUBSTANCE OR MIXTURE**

**GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)**  
CORROSIVE TO METALS (CATEGORY 1), H290  
SKIN CORROSION (CATEGORY 1B), H314  
SERIOUS EYE DAMAGE (CATEGORY 1), H318  
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (CATEGORY 3),  
RESPIRATORY SYSTEM, H335

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

**GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS  
PICTOGRAM**



SIGNAL WORD DANGER

**HAZARD STATEMENT(S)**

H290 MAY BE CORROSIVE TO METALS.

H314 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.

H335 MAY CAUSE RESPIRATORY IRRITATION.

**PRECAUTIONARY STATEMENT(S)**

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 IF INHALED: REMOVE VICTIM TO FRESH AIR AND KEEP AT  
REST IN A POSITION COMFORTABLE FOR BREATHING.

P305 + P351 + P338 IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL  
MINUTES. REMOVE CONTACT LENSES, IF PRESENT AND  
EASY TO DO. CONTINUE RINSING.

P310 IMMEDIATELY CALL A POISON CENTER OR DOCTOR/  
PHYSICIAN.

P321 SPECIFIC TREATMENT (SEE SUPPLEMENTAL FIRST AID  
INSTRUCTIONS ON THIS LABEL).

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.

P406 STORE IN CORROSIVE RESISTANT STAINLESS STEEL  
CONTAINER WITH A RESISTANT INNER LINER.

P501 DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED  
WASTE DISPOSAL PLANT.

**HAZARDS NOT  
OTHERWISE  
CLASSIFIED (HNOC)  
OR NOT COVERED  
BY GHS**

NONE

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

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MF: HCl

MW: 36.46

CAS-NO. 7647-01-0

PURITY: 31 - 33% (Assay by titration)

**HAZARDOUS COMPONENTS**

COMPONENT	CLASSIFICATION	CONCENTRATION
<b>HYDROCHLORIC ACID</b>		
	MET. CORR. 1; SKIN CORR. 1B; EYE DAM. 1; STOT SE 3; H290, H314, H335	30 - 50 %

FOR THE FULL TEXT OF THE H-STATEMENTS MENTIONED IN THIS SECTION, SEE SECTION 16.

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**SECTION 4. FIRST-AID MEASURES**

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**DESCRIPTION OF FIRST AID MEASURES**

<b>GENERAL ADVICE</b>	CONSULT A PHYSICIAN. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.MOVE OUT OF DANGEROUS AREA.
<b>IF INHALED</b>	IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. CONSULT A PHYSICIAN.
<b>IN CASE OF SKIN CONTACT</b>	TAKE OFF CONTAMINATED CLOTHING AND SHOES IMMEDIATELY. WASH OFF WITH SOAP AND PLENTY OF WATER. CONSULT A PHYSICIAN.
<b>IN CASE OF EYE CONTACT</b>	RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND CONSULT A PHYSICIAN.CONTINUE RINSING EYES DURING TRANSPORT TO HOSPITAL.
<b>IF SWALLOWED</b>	DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER. CONSULT A PHYSICIAN.
<b>MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED</b>	THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE SECTION 2.2) AND/OR IN SECTION 11

**INDICATION OF ANY  
IMMEDIATE MEDICAL  
ATTENTION AND  
SPECIAL TREATMENT  
NEEDED**

NO DATA AVAILABLE

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## **SECTION 5. FIRE AND EXPLOSION DATA**

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### **EXTINGUISHING MEDIA**

**SUITABLE  
EXTINGUISHING MEDIA**

USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY  
CHEMICAL OR CARBON DIOXIDE.

**SPECIAL HAZARDS  
ARISING FROM THE  
SUBSTANCE OR MIXTURE**

HYDROGEN CHLORIDE GAS

**ADVICE FOR  
FIREFIGHTERS**

WEAR SELF CONTAINED BREATHING APPARATUS FOR  
FIRE FIGHTING IF NECESSARY.

**FURTHER INFORMATION**

NO DATA AVAILABLE

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

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**PERSONAL  
PRECAUTIONS,  
PROTECTIVE  
EQUIPMENT AND  
EMERGENCY  
PROCEDURES**

WEAR RESPIRATORY PROTECTION. AVOID BREATHING  
VAPOURS, MIST OR GAS. ENSURE ADEQUATE  
VENTILATION. EVACUATE PERSONNEL TO SAFE  
AREAS.  
FOR PERSONAL PROTECTION SEE SECTION 8.

**ENVIRONMENTAL  
PRECAUTIONS**

DO NOT LET PRODUCT ENTER DRAINS.

**METHODS AND  
MATERIALS FOR  
CONTAINMENT AND  
CLEANING UP**

SOAK UP WITH INERT ABSORBENT MATERIAL AND  
DISPOSE OF AS HAZARDOUS WASTE. KEEP IN  
SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.

**REFERENCE TO OTHER  
SECTIONS**

FOR DISPOSAL SEE SECTION 13.

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## **SECTION 7. HANDLING AND STORAGE**

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<b>PRECAUTIONS FOR SAFE HANDLING</b>	AVOID CONTACT WITH SKIN AND EYES. AVOID INHALATION OF VAPOUR OR MIST. FOR PRECAUTIONS SEE SECTION 2.2.
<b>CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES</b>	KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND WELL-VENTILATED PLACE. CONTAINERS WHICH ARE OPENED MUST BE CAREFULLY RESEALED AND KEPT UPRIGHT TO PREVENT LEAKAGE.
<b>SPECIFIC END USE(S)</b>	APART FROM THE USES MENTIONED IN SECTION 1.2 NO OTHER SPECIFIC USES ARE STIPULATED

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### CONTROL PARAMETERS

#### COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

COMPONENT	CAS-NO.	VALUE	CONTROL PARAMETERS	BASIS
HYDROCHLORIC ACID	7647-01-0	C	2 PPM	USA. ACGIH THRESHOLD LIMIT VALUES (TLV)
	REMARKS	UPPER RESPIRATORY TRACT IRRITATION NOT CLASSIFIABLE AS A HUMAN CARCINOGEN		
		C	5 PPM 7 MG/M3	USA. NIOSH RECOMMENDED EXPOSURE LIMITS
		OFTEN USED IN AN AQUEOUS SOLUTION.		
		C	5 PPM 7 MG/M3	USA. OCCUPATIONAL EXPOSURE LIMITS (OSHA) - TABLE Z-1 LIMITS FOR AIR CONTAMINANTS
		THE VALUE IN MG/M3 IS APPROXIMATE. CEILING LIMIT IS TO BE DETERMINED FROM BREATHING-ZONE AIR SAMPLES.		
		C	5 PPM 7 MG/M3	USA. OSHA - TABLE Z-1 LIMITS FOR AIR CONTAMINANTS - 1910.1000

### EXPOSURE CONTROLS

**APPROPRIATE  
ENGINEERING  
CONTROLS**

HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICE. WASH HANDS BEFORE BREAKS AND AT THE END OF WORKDAY.

**PERSONAL PROTECTIVE EQUIPMENT**

**EYE/FACE PROTECTION**

TIGHTLY FITTING SAFETY GOGGLES. FACESHIELD (8-INCH MINIMUM). USE EQUIPMENT FOR EYE PROTECTION TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR EN 166(EU).

**SKIN PROTECTION**

HANDLE WITH GLOVES. GLOVES MUST BE INSPECTED PRIOR TO USE. USE PROPER GLOVE REMOVAL TECHNIQUE (WITHOUT TOUCHING GLOVE'S OUTER SURFACE) TO AVOID SKIN CONTACT WITH THIS PRODUCT. DISPOSE OF CONTAMINATED GLOVES AFTER USE IN ACCORDANCE WITH APPLICABLE LAWS AND GOOD LABORATORY PRACTICES. WASH AND DRY HANDS.

**FULL CONTACT**

MATERIAL: NITRILE RUBBER

MINIMUM LAYER THICKNESS: 0.11 MM

BREAK THROUGH TIME: 480 MIN

MATERIAL TESTED:DERMATRIL (KCL 740, SIZE M)

**SPLASH CONTACT**

MATERIAL: NITRILE RUBBER

MINIMUM LAYER THICKNESS: 0.11 MM

BREAK THROUGH TIME: 480 MIN

MATERIAL TESTED:DERMATRIL (KCL 740, SIZE M)

IF USED IN SOLUTION, OR MIXED WITH OTHER SUBSTANCES, AND UNDER CONDITIONS WHICH DIFFER FROM EN 374, CONTACT THE SUPPLIER OF THE CE APPROVED GLOVES. THIS RECOMMENDATION IS ADVISORY ONLY AND MUST BE EVALUATED BY AN INDUSTRIAL HYGIENIST AND SAFETY OFFICER FAMILIAR WITH THE SPECIFIC SITUATION OF ANTICIPATED USE BY OUR CUSTOMERS. IT SHOULD NOT BE CONSTRUED AS OFFERING AN APPROVAL FOR ANY SPECIFIC USE SCENARIO.

**BODY PROTECTION**

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 WORKPLACE.

**RESPIRATORY  
PROTECTION**

WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A FULL-FACE RESPIRATOR WITH MULTI- PURPOSE COMBINATION (US) OR TYPE ABEK (EN 14387) RESPIRATOR CARTRIDGES AS A BACKUP TO ENGINEERING CONTROLS. IF THE RESPIRATOR IS THE SOLE MEANS OF PROTECTION, USE A FULL-FACE SUPPLIED AIR RESPIRATOR. USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU).

**CONTROL OF  
ENVIRONMENTAL  
EXPOSURE**

DO NOT LET PRODUCT ENTER DRAINS.

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**SECTION 9.      PHYSICAL AND CHEMICAL PROPERTIES**

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**INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE	Colorless liquid
ODOUR	PUNGENT
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	NO DATA AVAILABLE
MELTING POINT/FREEZING POINT	
INITIAL BOILING POINT AND BOILING RANGE	
FLASH POINT	
EVAPORATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID, GAS)	NO DATA AVAILABLE
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	NO DATA AVAILABLE
VAPOUR PRESSURE	227 HPA (170 MMHG) AT 21.1 C, 547 HPA (410 MMHG) AT 37.7 C
VAPOUR DENSITY	NO DATA AVAILABLE
RELATIVE DENSITY	1.20 (Lit.)
WATER SOLUBILITY	SOLUBLE
PARTITION COEFFICIENT: N- OCTANOL/WATER	NO DATA AVAILABLE
AUTO-IGNITION TEMPERATURE	NO DATA AVAILABLE
DECOMPOSITION TEMPERATURE	NO DATA AVAILABLE
VISCOSITY	NO DATA AVAILABLE
EXPLOSIVE PROPERTIES	NO DATA AVAILABLE
OXIDIZING PROPERTIES	NO DATA AVAILABLE

**OTHER SAFETY  
INFORMATION**

NO DATA AVAILABLE

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**SECTION 10. STABILITY AND REACTIVITY**

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<b>REACTIVITY</b>	NO DATA AVAILABLE
<b>CHEMICAL STABILITY</b>	STABLE UNDER RECOMMENDED STORAGE CONDITIONS.
<b>POSSIBILITY OF HAZARDOUS REACTIONS</b>	NO DATA AVAILABLE
<b>CONDITIONS TO AVOID</b>	NO DATA AVAILABLE
<b>INCOMPATIBLE MATERIALS</b>	BASES, AMINES, ALKALI METALS, METALS, PERMANGANATES, E.G. POTASSIUM PERMANGANATE, FLUORINE, METAL ACETYLIDES, HEXALITHIUM DISILICIDE
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	OTHER DECOMPOSITION PRODUCTS - NO DATA AVAILABLE IN THE EVENT OF FIRE: SEE SECTION 5

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**SECTION 11. TOXICOLOGICAL INFORMATION**

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**INFORMATION ON TOXICOLOGICAL EFFECTS**

<b>ACUTE TOXICITY</b>	INHALATION: NO DATA AVAILABLE (HYDROCHLORIC ACID) DERMAL: NO DATA AVAILABLE (HYDROCHLORIC ACID)
<b>SKIN CORROSION/IRRITATION</b>	SKIN - RABBIT RESULT: CAUSES BURNS.
<b>SERIOUS EYE DAMAGE/EYE IRRITATION</b>	EYES - RABBIT (HYDROCHLORIC ACID) RESULT: CORROSIVE TO EYES
<b>RESPIRATORY OR SKIN SENSITISATION</b>	NO DATA AVAILABLE (HYDROCHLORIC ACID)
<b>GERM CELL MUTAGENICITY</b>	NO DATA AVAILABLE (HYDROCHLORIC ACID)



<b>CARCINOGENICITY</b>	THIS PRODUCT IS OR CONTAINS A COMPONENT THAT IS NOT CLASSIFIABLE AS TO ITS CARCINOGENICITY BASED ON ITS IARC, ACGIH, NTP, OR EPA CLASSIFICATION. (HYDROCHLORIC ACID)
IARC:	(HYDROCHLORIC ACID) (HYDROCHLORIC ACID) 3 - GROUP 3: NOT CLASSIFIABLE AS TO ITS CARCINOGENICITY TO HUMANS (HYDROCHLORIC ACID)
NTP:	NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A KNOWN OR ANTICIPATED CARCINOGEN BY NTP.
OSHA:	NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY OSHA.
<b>REPRODUCTIVE TOXICITY</b>	NO DATA AVAILABLE (HYDROCHLORIC ACID)
<b>SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE</b>	THE SUBSTANCE OR MIXTURE IS CLASSIFIED AS SPECIFIC TARGET ORGAN TOXICANT, SINGLE EXPOSURE, CATEGORY 3 WITH RESPIRATORY TRACT IRRITATION. (HYDROCHLORIC ACID)
<b>SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE</b>	NO DATA AVAILABLE (HYDROCHLORIC ACID)
<b>ASPIRATION HAZARD</b>	NO DATA AVAILABLE (HYDROCHLORIC ACID)
<b>ADDITIONAL INFORMATION</b>	RTECS: MW4025000 BURNING SENSATION, COUGH, WHEEZING, LARYNGITIS, SHORTNESS OF BREATH, SPASM, INFLAMMATION AND EDEMA OF THE LARYNX, SPASM, INFLAMMATION AND EDEMA OF THE BRONCHI, PNEUMONITIS, PULMONARY EDEMA, MATERIAL IS EXTREMELY DESTRUCTIVE TO TISSUE OF THE MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT, EYES, AND SKIN. (HYDROCHLORIC ACID)

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## SECTION 12. ECOLOGICAL INFORMATION

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<b>TOXICITY</b>	
TOXICITY TO FISH	LC50 - GAMBUSIA AFFINIS (MOSQUITO FISH) - 282 MG/L - 96 H (HYDROCHLORIC ACID)
<b>PERSISTENCE AND DEGRADABILITY</b>	NO DATA AVAILABLE

<b>BIOACCUMULATIVE POTENTIAL</b>	NO DATA AVAILABLE
<b>MOBILITY IN SOIL</b>	NO DATA AVAILABLE (HYDROCHLORIC ACID)
<b>RESULTS OF PBT AND VPVB ASSESSMENT</b>	PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT CONDUCTED
<b>OTHER ADVERSE EFFECTS</b>	NO DATA AVAILABLE

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## SECTION 13. DISPOSAL CONSIDERATIONS

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### WASTE TREATMENT METHODS

<b>PRODUCT</b>	OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO A LICENSED DISPOSAL COMPANY. CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL. DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.
<b>CONTAMINATED PACKAGING</b>	DISPOSE OF AS UNUSED PRODUCT.

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## SECTION 14. TRANSPORT INFORMATION

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### DOT (US)

PROPER SHIPPING NAME:	HYDROCHLORIC ACID
UN NUMBER:	1789
CLASS:	8
PACKING GROUP:	II
REPORTABLE QUANTITY (RQ):	13514 LBS
MARINE POLLUTANT:	NO
POISON INHALATION HAZARD:	NO

### IMDG

PROPER SHIPPING NAME:	HYDROCHLORIC ACID
UN NUMBER:	1789
CLASS:	8
PACKING GROUP:	II
EMS-NO:	F-A, S-B
MARINE POLLUTANT:	NO

**IATA**  
PROPER SHIPPING NAME: HYDROCHLORIC ACID  
UN NUMBER: 1789  
CLASS: 8  
PACKING GROUP: II

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## **SECTION 15. REGULATORY INFORMATION**

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**SARA 302 COMPONENTS** SARA 302: NO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III, SECTION 302.

**SARA 313 COMPONENTS** THE FOLLOWING COMPONENTS ARE SUBJECT TO REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313:

	CAS-NO.	REVISION DATE
Hydrochloric acid	7647-01-0	4/24/1993

**SARA 311/312 HAZARDS** ACUTE HEALTH HAZARD

**MASSACHUSETTS RIGHT TO KNOW COMPONENTS**

	CAS-NO.	REVISION DATE
Hydrochloric acid	7647-01-0	4/24/1993

**PENNSYLVANIA RIGHT TO KNOW COMPONENTS**

	CAS-NO.	REVISION DATE
WATER	7732-18-5	4/24/1993
Hydrochloric acid	7647-01-0	4/24/1993

**NEW JERSEY RIGHT TO KNOW COMPONENTS**

	CAS-NO.	REVISION DATE
WATER	7732-18-5	4/24/1993
Hydrochloric acid	7647-01-0	4/24/1993

**CALIFORNIA PROP. 65 COMPONENTS** THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALS KNOWN TO STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR ANY OTHER REPRODUCTIVE HARM.

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## **SECTION 16. OTHER INFORMATION**

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**FULL TEXT OF H-STATEMENTS REFERRED TO UNDER SECTIONS 2 AND 3.**

EYE DAM.	SERIOUS EYE DAMAGE
H290	MAY BE CORROSIVE TO METALS.
H314	CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
H318	CAUSES SERIOUS EYE DAMAGE.
H335	MAY CAUSE RESPIRATORY IRRITATION.

MET. CORR.	CORROSIVE TO METALS
SKIN CORR.	SKIN CORROSION
STOT SE	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE

#### HMIS RATING

HEALTH HAZARD:	3
CHRONIC HEALTH HAZARD:	
FLAMMABILITY:	0
PHYSICAL HAZARD	0

#### NFPA RATING

HEALTH HAZARD:	3
FIRE HAZARD:	0
REACTIVITY HAZARD:	0

#### MSDS LEGEND

MW:	MOLECULAR WEIGHT
MF:	MOLECULAR FORMULA
VOC:	VOLATILE ORGANIC COMPOUNDS
ACGIH:	AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
CAS:	CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER
OSHA:	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PEL:	PERMISSIBLE EXPOSURE LIMIT (OSHA)
TLV:	THRESHOLD LIMIT VALUE (ACGIH)

#### IMPORTANT:

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