

PRODUCT NAME:
MURIATIC ACID ALL GRADES

DS #: OZ34514

1. CHEMICAL PRODUCT IDENTIFICATION

MSDS NUMBER : M34514 ISSUE DATE : 01/01/98
PRODUCT NAME : MURIATIC ACID ALL GRADES
24 HOUR EMERGENCY TELEPHONE : 1-800-733-3665
PRODUCT USE : CHEMICAL PROCESSING/METAL CLEANING
CHEMICAL NAME : HYDROGEN CHLORIDE
CHEMICAL FORMULA : HCL
SYNONYMS/COMMON NAMES : HCL SOLUTION
AQUEOUS HYDROGEN CHLORIDE
HYDROCHLORIC ACID

2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS NUMBER / NAME
7732-18-5 WATER

EXPOSURE LIMITS PERCENTAGE
PEL:NOT ESTABLISHED VOL ND
TLV:NOT ESTABLISHED WT 64-91

COMMON NAMES:

LISTED ON(LIST LEGEND BELOW):
00 19 22 23 50 51

7647-01-0 HYDROCHLORIC ACID

EXPOSURE LIMITS PERCENTAGE
PEL:5 PPM; 7 MG/M3, CEILING VOL ND
TLV:5 PPM; 7.5 MG/M3, CEILING WT 9-36

COMMON NAMES:
HYDROGEN CHLORIDE

LISTED ON(LIST LEGEND BELOW):
00 01 02 13 18 21 22 45 50 51

LIST LEGEND

00 TSCA INVENTORY 01 SARA EXTR HAZ SUB, SECTION 302
02 SARA TOXIC CHEM, SECTION 313 13 PA ENVIROMENTAL HAZ SUBSTANCE
18 NY HAZARDOUS SUBSTANCES 19 PA REQUIREMENT- 3% OR GREATER
21 NJ SPECIAL HEALTH HAZ SUB 22 CANADIAN DOMESTIC SUB LIST
23 NJ REQUIREMENT- 1% OR GREATER 45 EPA/OSHA ACCIDENTAL RELEASE
50 PHILIPPINES INVENTORY (PICCS) 51 EINECS

HAZARDS IDENTIFICATION

***** EMERGENCY OVERVIEW *****
*
* CORROSIVE. CAUSES SEVERE BURNS TO EYES, SKIN AND DIGESTIVE TRACT. *

* SEVERELY IRRITATING TO RESPIRATORY TRACT, EYES AND SKIN. MAY *
* CAUSE IRRITATION OF DIGESTIVE TRACT. MAY CAUSE DISCOLORATION OF *
* TEETH. *
* *
* CLEAR TO LIGHT AMBER LIQUID WITH A PUNGENT ODOR. *

POTENTIAL HEALTH EFFECTS

ROUTES OF ENTRY:

INHALATION, INGESTION.

TARGET ORGANS:

EYES, SKIN, RESPIRATORY TRACT, GASTROINTESTINAL TRACT.

IRRITANCY:

ALL ROUTES OF EXPOSURE.

SENSITIZING CAPABILITY:

NONE KNOWN.

REPRODUCTIVE EFFECTS:

NONE KNOWN.

CANCER INFORMATION:

NOT KNOWN TO BE CARCINOGENIC.

SHORT-TERM EXPOSURE (ACUTE)

INHALATION:

BREATHING GAS, FOG, MIST OR SPRAY MAY RESULT IN COUGHING AND A BURNING OR CHOKING SENSATION IN THE THROAT. IF INHALED DEEPLY, FLUID MAY COLLECT IN THE LUNGS (EDEMA). PROLONGED OR REPEATED EXPOSURE TO CONCENTRATIONS IN EXCESS OF THE EXPOSURE LIMITS MAY CAUSE DISCOLORATION OF TEETH.

EYES:

CONTACT RAPIDLY CAUSES SEVERE IRRITATION OF THE EYES AND EYELIDS. IF NOT QUICKLY REMOVED BY THOROUGH IRRIGATION WITH WATER, THERE MAY BE PROLONGED OR PERMANENT VISUAL IMPAIRMENT OR TOTAL LOSS OF SIGHT. HYDROGEN CHLORIDE GAS ESCAPING FROM THE AQUEOUS SOLUTION IS IMMEDIATELY IRRITATING.

SKIN:

CONTACT MAY CAUSE BURNS AND TISSUE DESTRUCTION.

INGESTION:

CAN CAUSE SEVERE BURNS TO THE MUCOUS MEMBRANES OF THE DIGESTIVE TRACT.

REPEATED EXPOSURE (CHRONIC)

NONE KNOWN.

SYNERGISTIC MATERIALS:

NONE KNOWN.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

PRE-EXISTING DISORDERS AFFECTING TARGET ORGANS.

SECTION THAT FOLLOWS HAS BEEN REVISED

4. FIRST AID MEASURES

EYES:

IMMEDIATELY FLUSH EYES WITH A DIRECTED STREAM OF WATER FOR AT LEAST 15 MINUTES, FORCIBLY HOLDING EYELIDS APART TO ENSURE COMPLETE IRRIGATION OF ALL EYE AND LID TISSUE. WASHING EYES WITHIN SEVERAL SECONDS IS ESSENTIAL TO ACHIEVE MAXIMUM EFFECTIVENESS. GET MEDICAL ATTENTION

IMMEDIATELY.

SKIN:

FLUSH THOROUGHLY WITH COOL WATER UNDER SHOWER WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. DISCARD NON-RUBBER SHOES. WASH CLOTHING BEFORE REUSE. GET MEDICAL ATTENTION AS SOON AS POSSIBLE.

INHALATION:

REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, HAVE TRAINED PERSON ADMINISTER OXYGEN. IF RESPIRATION STOPS, HAVE A TRAINED PERSON ADMINISTER ARTIFICIAL RESPIRATION. GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION:

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. IF SWALLOWED, DO NOT INDUCE VOMITING. GIVE LARGE QUANTITIES OF WATER. (IF AVAILABLE, GIVE SEVERAL GLASSES OF MILK.) IF VOMITING OCCURS SPONTANEOUSLY, KEEP AIRWAY CLEAR AND GIVE MORE WATER. GET MEDICAL ATTENTION IMMEDIATELY.

NOTES TO PHYSICIAN:

NO SPECIALIZED PROCEDURES. TREAT FOR CLINICAL SYMPTOMS.

5. FIRE FIGHTING MEASURES

FLASH POINT: NON-FLAMMABLE

METHOD: NOT APPLICABLE

AUTOIGNITION TEMPERATURE: NOT APPLICABLE

FLAMMABLE LIMITS IN AIR, BY % VOLUME

UPPER: NON-FLAMMABLE

LOWER: NON-FLAMMABLE

EXTINGUISHING MEDIA:

NON-FLAMMABLE / NON-COMBUSTIBLE.

USE AGENTS APPROPRIATE FOR SURROUNDING FIRE.

USE WATER SPRAY TO KEEP FIRE-EXPOSED CONTAINERS COOL.

FIRE FIGHTING PROCEDURES:

KEEP UNAUTHORIZED PERSONNEL REMOVED AND UPWIND. WEAR NIOSH/MSHA APPROVED POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING.

FIRE AND EXPLOSION HAZARD:

THIS PRODUCT IS NONFLAMMABLE AND NONEXPLOSIVE UNDER NORMAL CONDITIONS OF USE. AT HIGH TEMPERATURES THIS PRODUCT CAN DECOMPOSE TO GIVE OFF HYDROCHLORIC ACID AND GAS.

VAPORS ARE IRRITATING TO THE EYES AND NOSE. LIQUID IS CORROSIVE TO THE SKIN

THIS PRODUCT ATTACKS MOST METALS WITH THE EVOLUTION OF EXPLOSIVE HYDROGEN GAS.

SENSITIVITY TO MECHANICAL IMPACT:

NOT SENSITIVE.

SENSITIVITY TO STATIC DISCHARGE:

NOT SENSITIVE.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

EVACUATE UNNECESSARY PERSONNEL.

KEEP UNPROTECTED PERSONNEL UPWIND OF THE SPILL AREA.

FOLLOW PROTECTIVE MEASURES PROVIDED UNDER PERSONAL PROTECTION IN SECTION 8.

ENVIRONMENTAL PRECAUTIONS:

CONTAIN SPILL WITH DIKE TO PREVENT ENTRY INTO SEWERS OR WATERWAYS.

ACCORDING TO 40 CFR 302 TABLE 302.4 (CERCLA), ENVIRONMENTAL RELEASES THAT EXCEED THE RQ MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER BY CALLING 800-424-8802 (202-426-2675) AND THE STATE EMERGENCY RESPONSE COMMISSION AND THE LOCAL EMERGENCY PLANNING COMMITTEE (40 CFR 355.40) AS APPROPRIATE.

METHODS FOR CLEANING UP:

LARGE SPILLS SHOULD BE REMOVED BY VACUUM TRUCK. SMALLER SPILLS MAY BE SOAKED UP AND NEUTRALIZED WITH SODA ASH WHICH SHOULD BE PLACED IN CLOSED CONTAINERS, LABELED AND STORED IN A SAFE PLACE OUTDOORS TO AWAIT PROPER DISPOSAL. SPILLS ON AREAS OTHER THAN PAVEMENT, E.G., DIRT OR SAND, MAY BE HANDLED BY REMOVING THE AFFECTED SOILS AND PLACING IN APPROVED CONTAINERS.

7. HANDLING AND STORAGE

HANDLING:

WEAR PERSONAL PROTECTIVE EQUIPMENT AS DESCRIBED IN EXPOSURE CONTROLS/PERSONAL PROTECTION (SECTION 8) OF THE MSDS.

AVOID BREATHING VAPOR, USE WITH ADEQUATE VENTILATION. WEAR NIOSH/MSHA APPROVED RESPIRATORY PROTECTION IF THERE IS POTENTIAL FOR EXPOSURE ABOVE THE EXPOSURE LIMITS.

KEEP AWAY FROM SOURCES OF IGNITION BECAUSE TOXIC, CORROSIVE AND EXPLOSIVE GASES MAY BE FORMED.

WASH THOROUGHLY AFTER HANDLING.

OPEN CONTAINER CAREFULLY TO AVOID SPURTING.

SPECIAL MIXING AND HANDLING INSTRUCTIONS:

DO NOT ADD WATER DIRECTLY TO PRODUCT, AND DO NOT MIX WITH ALKALIES SUCH AS SODIUM HYDROXIDE (CAUSTIC SODA) OR ALKALI METALS, TO AVOID A POSSIBLE VIOLENT REACTION. THE PRODUCT MAY BE ADDED TO WATER WITH MIXING AND DILUTION.

STORAGE:

STORE IN A COOL, VENTILATED AREA AWAY FROM INCOMPATIBLE MATERIALS (SEE SECTION 10).

DIKE AND VENT STORAGE TANKS.

DO NOT STORE IN UNLINED CONTAINERS.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

GENERAL ROOM VENTILATION PLUS LOCAL EXHAUST AT POINTS OF EMISSION TO MAINTAIN LEVELS OF AIRBORNE CONTAMINANTS BELOW EXPOSURE LIMITS.

PERSONAL PROTECTION

RESPIRATORY:

WEAR A NIOSH/MSHA APPROVED RESPIRATOR FOLLOWING MANUFACTURER'S RECOMMENDATIONS, WHERE AIRBORNE CONTAMINANTS MAY OCCUR.

EYE/FACE:

WEAR CHEMICAL SAFETY GOGGLES PLUS FULL FACE SHIELD TO PROTECT AGAINST SPLASHING WHEN APPROPRIATE (ANSI Z87.1).

SKIN:

WEAR CHEMICAL RESISTANT GLOVES SUCH AS RUBBER, NEOPRENE OR VINYL.

WHENEVER THERE IS A POSSIBILITY OF SPLASH OR CONTACT WEAR A CHEMICAL RESISTANT FULL BODY SUIT AND BOOTS.

OTHER:

EMERGENCY SHOWER AND EYEWASH FACILITY SHOULD BE IN CLOSE PROXIMITY (ANSI Z358.1).

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: CLEAR TO LIGHT AMBER LIQUID WITH A PUNGENT ODOR.

ODOR THRESHOLD: NOT AVAILABLE

SPECIFIC GRAVITY (WATER=1): 1.05 TO 1.18

VAPOR PRESSURE: 14.6 TO 80

VAPOR DENSITY (AIR=1): 1.3 @ 20 C

DENSITY: 8.75 TO 9.83 LB/GAL

EVAPORATION RATE: NOT AVAILABLE

% VOLATILES BY WT: NOT APPLICABLE

BOILING POINT: 140 F (60 C) TO 221 F (105 C)

FREEZING POINT: -29 F (-34 C) TO 5 F (-15 C)

MELTING POINT: NOT AVAILABLE

SOLUBILITY IN WATER (% BY WT.): 100

PH: 0.2% SOLUTION HAS A PH OF 2

OCTANOL/WATER PARTITION COEFFICIENT: NOT AVAILABLE

THERMAL DECOMPOSITION TEMPERATURE: NOT AVAILABLE

OTHER: AQUEOUS HCL SOLUTIONS ON BOILING GO TO A CONSTANT BOILING MIXTURE THAT CONTAINS 20.24% HCL @ 110 C

VOC (G/L. BY WT.): NOT APPLICABLE

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:

STABLE UNSTABLE

REACTS WITH:

<input type="checkbox"/>	AIR	<input type="checkbox"/>	OXIDIZERS	<input checked="" type="checkbox"/>	METALS
<input type="checkbox"/>	WATER	<input type="checkbox"/>	ACIDS	<input type="checkbox"/>	OTHER
<input checked="" type="checkbox"/>	HEAT	<input checked="" type="checkbox"/>	ALKALIS	<input type="checkbox"/>	NONE

HAZARDOUS POLYMERIZATION:

OCCURS WILL NOT OCCUR

COMMENTS:

AVOID CONTACT WITH ALKALI METALS OR OTHER ACTIVE METALS AND CERTAIN OF THEIR COMPOUNDS. DO NOT ADD WATER DIRECTLY TO THE PRODUCT. THE PRODUCT MAY BE ADDED TO WATER WITH MIXING AND DILUTION.

HAZARDOUS DECOMPOSITION PRODUCTS:

GENERATES TOXIC AND IRRITATING GASES AT HIGH TEMPERATURES. REACTS WITH METALS WITH THE EVOLUTION OF HYDROGEN WHICH WHEN MIXED IN AIR MAY RESULT IN FIRE OR EXPLOSION IF IGNITED. CHLORINE GAS MAY BE RELEASED BY MIXING WITH STRONG OXIDIZERS.

11. TOXICOLOGICAL INFORMATION

7647-01-0 HYDROCHLORIC ACID
ACUTE ORAL LD50 : (RABBIT) 900 MG/KG

ACUTE INHALATION LC50 : (RAT, 1 HR) 3124 PPM

12. ECOLOGICAL INFORMATION

7647-01-0 HYDROCHLORIC ACID
AQUATIC ECOTOX DATA
FISH:
LC50 (96 HR.) (MOSQUITO FISH) 282 MG/L

LC100(24 HR.) (TROUT) 10 MG/L

INVERTEBRATES:
LC50 (48 HR.) (STARFISH) 100 - 330 MG/L

LC50 (48 HR.) (SHRIMP) 100 - 330 MG/L

LC50 (48 HR.) (SHORE CRAB) 240 MG/L

AMPHIBIANS:
 NO DATA AVAILABLE

PLANTS:
 NO DATA AVAILABLE

TERRESTRIAL ECOTOX DATA
WILDLIFE:
 NO DATA AVAILABLE

PLANTS:
 NO DATA AVAILABLE

ENVIRONMENTAL FATE DATA
BIOTIC:
 NO DATA AVAILABLE

ABIOTIC:
 DISSOCIATES IN WATER

HYDROCHLORIC ACID CAN BE ACUTELY TOXIC IN AQUATIC LIFE THROUGH REDUCTION IN AQUEOUS PH TO TOXIC LEVELS. TYPICALLY MOST AQUATIC SPECIES ARE INTOLERANT OF PH LEVELS LOWER THAN 5.5 FOR ANY EXTENDED LENGTH OF TIME. REDUCTION IN AQUEOUS PH LEVELS MAY ALSO CAUSE THE LIBERATION OF METALS SUCH AS ALUMINUM WHICH WILL ALSO CONTRIBUTE TO EXHIBITED TOXICITY. HYDROCHLORIC ACID WILL DISSOCIATE IN WATER AND UNDERGO NEUTRALIZATION WITH CARBONATE AND OTHER NATURALLY OCCURRING BUFFERING AGENTS. TERRESTRIAL ORGANISMS WOULD BE SUBJECT TO SEVERE BURNS IF EXPOSED TO HCL DURING AN ACCIDENTAL RELEASE. A LARGE HCL RELEASE COULD LEAD TO A PERSISTENT REDUCTION IN PH IN A POORLY BUFFERED SYSTEM LACKING IN CARBONATES OR OTHER NATURALLY OCCURRING ACID NEUTRALIZERS. CARE SHOULD BE TAKEN TO AVOID ACCIDENTAL RELEASES

13. DISPOSAL CONSIDERATIONS

THE MATERIALS RESULTING FROM CLEAN-UP OPERATIONS MAY BE HAZARDOUS WASTES AND, THEREFORE, SUBJECT TO SPECIFIC REGULATIONS. PACKAGE, STORE, TRANSPORT, AND DISPOSE OF ALL (CLEAN-UP) MATERIALS AND ANY CONTAMINATED EQUIPMENT IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.

ENSURE THAT ALL RESPONSIBLE FEDERAL, STATE, AND LOCAL AGENCIES RECEIVE PROPER NOTIFICATION OF SPILL AND DISPOSAL METHODS.

SHIPMENTS OF WASTE MATERIALS MAY BE SUBJECT TO MANIFESTING REQUIREMENTS PER APPLICABLE REGULATIONS. APPROPRIATE DISPOSAL WILL DEPEND ON THE NATURE OF EACH WASTE MATERIAL AND SHOULD BE DONE BY A COMPETENT AND PROPERLY PERMITTED CONTRACTOR.

14. TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: HYDROCHLORIC ACID, SOLUTION

DOT HAZARD CLASS: 8

DOT IDENTIFICATION NUMBER: UN1789

DOT PACKING GROUP: II

DOT HAZARDOUS SUBSTANCE(S): RQ 5,000 LBS. (HYDROCHLORIC ACID)

DOT MARINE POLLUTANT(S): NOT APPLICABLE

ADDITIONAL DESCRIPTION REQUIREMENT: NOT APPLICABLE

REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

OSHA STANDARD 29 CFR 1910.1200 REQUIRES THAT INFORMATION BE PROVIDED TO EMPLOYEES REGARDING THE HAZARDS OF CHEMICALS BY MEANS OF A HAZARD COMMUNICATION PROGRAM INCLUDING LABELING, MATERIAL SAFETY DATA SHEETS, TRAINING AND ACCESS TO WRITTEN RECORDS. WE REQUEST THAT YOU, AND IT IS YOUR LEGAL DUTY TO, MAKE ALL INFORMATION IN THIS MATERIAL SAFETY DATA SHEET AVAILABLE TO YOUR EMPLOYEES.

TO AID OUR CUSTOMERS IN COMPLYING WITH REGULATORY REQUIREMENTS, SARA TITLE III HAZARD CATEGORIES FOR THIS PRODUCT ARE INDICATED BELOW. IF THE WORD "YES" APPEARS NEXT TO ANY CATEGORY, THIS PRODUCT MAY BE REPORTABLE BY YOU UNDER THE REQUIREMENTS OF 40.CFR.370. PLEASE CONSULT THOSE REGULATIONS FOR DETAILS.

UNDER SECTION 302 OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986, HYDROGEN CHLORIDE IN THE GAS PHASE IS CLASSIFIED AS AN EXTREMELY HAZARDOUS SUBSTANCE. THIS MATERIAL CONTAINS HYDROGEN CHLORIDE IN AQUEOUS SOLUTION.

THIS PRODUCT CONTAINS A TOXIC CHEMICAL OR CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR 372. SEE SECTION 2, LIST LEGEND 02.

TSCA:

ALL COMPONENTS OF THIS PRODUCT THAT ARE REQUIRED TO BE ON THE TSCA INVENTORY ARE LISTED ON THE INVENTORY.

SARA/TITLE III HAZARD CATEGORIES:

IMMEDIATE (ACUTE) HEALTH: YES REACTIVE HAZARD YES

DELAYED (CHRONIC) HEALTH: NO SUDDEN RELEASE OF PRESSURE NO
FIRE HAZARD: NO

HMIS HAZARD RATINGS:

HEALTH HAZARD: 3 FIRE HAZARD: 0 REACTIVITY: 2

STATE REGULATIONS:

SEE SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS LIST LEGEND FOR APPLICABLE STATE REGULATION.

CONSULT LOCAL LAWS FOR APPLICABILITY.

INTERNATIONAL REGULATIONS:

CONSULT THE REGULATIONS OF THE IMPORTING COUNTRY.

CANADA:

WHMIS HAZARD CLASS: D1B, E

16. OTHER INFORMATION

MSDS LEGEND:

ACGIH = AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS

CAS = CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER

CEILING = CEILING LIMIT (15 MINUTES)

CEL = CORPORATE EXPOSURE LIMIT

OSHA = OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

PEL = PERMISSIBLE EXPOSURE LIMIT (OSHA)

STEL = SHORT TERM EXPOSURE LIMIT (15 MINUTES)

TDG = TRANSPORTATION OF DANGEROUS GOODS (CANADA)

TLV = THRESHOLD LIMIT VALUE (ACGIH)

TWA = TIME WEIGHTED AVERAGE (8 HOURS)

WHMIS = WORKER HAZARDOUS MATERIALS INFORMATION SYSTEM (CANADA)

* = SEE SECTION 3 HAZARDS IDENTIFICATION - REPEATED EXPOSURE (CHRONIC) INFORMATION

THIS MATERIAL SAFETY DATA SHEET (MSDS) COVERS THE FOLLOWING MATERIALS:

- MURIATIC ACID 20BE
- MURIATIC ACID 32% (20 DEG. BE')
- MURIATIC ACID 18%-BELLE
- MURIATIC ACID 20 BE' DEER PARK
- MURIATIC ACID 20 BE' COMMERCIAL NIAGARA
- MURIATIC ACID 20 BE' WATER WHITE NIAGARA
- MURIATIC ACID 20 BE' HIGH GRADE EXCHANGE
- MURIATIC ACID 20 COMMERCIAL

- MURIATIC ACID 20 BE' WATER WHITE TACOMA
- MURIATIC ACID 22 BE' WATER WHITE TACOMA
- MURIATIC ACID 18%-NIAGARA
- MURIATIC ACID 10%-DEER PARK
- MUR ACD 20 WW-TAC (CAN)
- MUR ACD 22 WW-TAC (CAN)
- MUR ACID 20 COM NF (CAN)
- MUR ACD 20 WW-NIAG (CAN)

SECTION THAT FOLLOWS HAS BEEN REVISED
17. WARNING LABEL INFORMATION

SIGNAL WORD:
DANGER

HAZARD WARNINGS:
CORROSIVE.

CAUSES SEVERE BURNS TO EYES, SKIN AND DIGESTIVE TRACT.
SEVERELY IRRITATING TO RESPIRATORY TRACT, EYES AND SKIN.
MAY CAUSE IRRITATION OF DIGESTIVE TRACT.
MAY CAUSE DISCOLORATION OF TEETH.

PRECAUTIONS:

KEEP CONTAINER TIGHTLY CLOSED AND PROPERLY LABELED.
AVOID BREATHING VAPORS.
USE WITH ADEQUATE VENTILATION TO MAINTAIN EXPOSURE LEVEL BELOW PEL.
AVOID CONTACT WITH EYES, SKIN AND CLOTHING.
WEAR CHEMICAL SAFETY GOGGLES PLUS FULL FACE SHIELD TO PROTECT AGAINST SPLASHING WHEN APPROPRIATE (ANSI Z87.1).
WASH THOROUGHLY AFTER HANDLING.
AVOID CONTACT WITH METALS.
DO NOT ALLOW ENTRY INTO SEWERS AND WATERWAYS.
WEAR CHEMICAL RESISTANT CLOTHING.
MATERIAL IN CONTACT WITH METALS MAY LIBERATE FLAMMABLE HYDROGEN GAS.

FIRST AID

EYES:

IMMEDIATELY FLUSH EYES WITH A DIRECTED STREAM OF WATER FOR AT LEAST 15 MINUTES, FORCIBLY HOLDING EYELIDS APART TO ENSURE COMPLETE IRRIGATION OF ALL EYE AND LID TISSUE. WASHING EYES WITHIN SEVERAL SECONDS IS ESSENTIAL TO ACHIEVE MAXIMUM EFFECTIVENESS. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN:

FLUSH THOROUGHLY WITH COOL WATER UNDER SHOWER WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. DISCARD NON-RUBBER SHOES. WASH CLOTHING BEFORE REUSE. GET MEDICAL ATTENTION AS SOON AS POSSIBLE.

INHALATION:

REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, HAVE TRAINED PERSON ADMINISTER OXYGEN. IF RESPIRATION STOPS, HAVE A TRAINED PERSON ADMINISTER ARTIFICIAL RESPIRATION. GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION:

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. IF SWALLOWED, DO NOT INDUCE VOMITING. GIVE LARGE QUANTITIES OF WATER. (IF AVAILABLE, GIVE SEVERAL GLASSES OF MILK.) IF VOMITING OCCURS SPONTANEOUSLY, KEEP AIRWAY CLEAR AND GIVE MORE WATER. GET MEDICAL ATTENTION IMMEDIATELY.

IN CASE OF SPILL OR LEAK:

GET PROTECTIVE EQUIPMENT.

CONTAIN SPILL AND PUMP INTO MARKED CONTAINER FOR RECLAMATION OR DISPOSAL.

AVOID DISCHARGES TO SEWERS AND STREAMS.

SPILLS OF 5000 POUNDS OR MORE MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER, 1-800-424-8802.

USE NIOSH/MSHA SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE EQUIPMENT.

FIRE:

MATERIAL DOES NOT BURN.

USE EXTINGUISHING MEDIUM AS APPROPRIATE FOR SURROUNDING FIRE.

USE NIOSH/MSHA SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE EQUIPMENT.

FIRE WILL LIBERATE TOXIC GASES.

HANDLING AND STORAGE:

STORE IN A COOL, DRY, WELL-VENTILATED AREA AWAY FROM METALS AND STRONG ALKALIES, FLAMMABLE SUBSTANCES AND OXIDIZING MATERIALS.

DIKE AND VENT STORAGE TANKS.

DO NOT STORE IN UNLINED CONTAINERS.

DO NOT ADD WATER DIRECTLY TO PRODUCT, DO NOT MIX WITH ALKALIES OR ALKALI METALS.

DISPOSAL:

SUBMIT TO AN APPROVED CHEMICAL DISPOSAL SERVICE FOR DISPOSAL IN ACCORDANCE WITH GOVERNMENT REGULATIONS.

INFORMATION REQUIRED BY FEDERAL, STATE OR LOCAL REGULATIONS:

THIS PRODUCT CONTAINS:

CAS#	NAME
7732-18-5	WATER
7647-01-0	HYDROCHLORIC ACID
HMIS RATING:	HEALTH <u> 3 </u> FLAMMABILITY <u> 0 </u> REACTIVITY <u> 2 </u>

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* * * E N D O F M S D S * * *