# Chem-Impex International Inc.

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# SAFETY DATA SHEET

# SECTION 1. CHEMICAL IDENTIFICATION

CATALOG #: 01235

NAME: Hydroxylamine hydrochloride

SYNONYMS: Hydroxylammonium chloride

24 HOUR EMERGENCY

TELEPHONE:

(800) 535-5053(USA)

352-323-3500 (INTERNATIONAL)

TO REQUEST AN MSDS: (800) 869-9290

CUSTOMER SERVICE:

(630) 766-2112

# SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS)

CORROSIVE TO METALS (CATEGORY 1), H290 ACUTE TOXICITY, ORAL (CATEGORY 4), H302 ACUTE TOXICITY, DERMAL (CATEGORY 4), H312 SKIN IRRITATION (CATEGORY 2), H315 EYE IRRITATION (CATEGORY 2A), H319 SKIN SENSITISATION (CATEGORY 1), H317 CARCINOGENICITY (CATEGORY 2), H351

SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE (CATEGORY

ACUTE AQUATIC TOXICITY (CATEGORY 1), H400 CHRONIC AQUATIC TOXICITY (CATEGORY 1), H410

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

# GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS

**PICTOGRAM** 

SIGNAL WORD

HAZARD STATEMENT(S)		
H290	MAY BE CORROSIVE TO METALS.	
H302 + H312	HARMFUL IF SWALLOWED OR IN CONTACT	
	WITH SKIN	
H315	CAUSES SKIN IRRITATION.	
H317	MAY CAUSE AN ALLERGIC SKIN REACTION.	
H319	CAUSES SERIOUS EYE IRRITATION.	
H351	SUSPECTED OF CAUSING CANCER.	
H373	MAY CAUSE DAMAGE TO ORGANS THROUGH	
	PROLONGED OR REPEATED EXPOSURE.	
H410	VERY TOXIC TO AQUATIC LIFE WITH LONG	
	LASTING EFFECTS.	
PRECAUTIONARY STATEMENT(S)		
P201	OBTAIN SPECIAL INSTRUCTIONS BEFORE USE.	
P202	DO NOT HANDLE UNTIL ALL SAFETY	
	PRECAUTIONS HAVE BEEN READ AND	
	UNDERSTOOD.	
P234	KEEP ONLY IN ORIGINAL CONTAINER.	
P260	DO NOT BREATHE DUST/ FUME/ GAS/ MIST/	
	VAPOURS/ SPRAY	

P260	DO NOT BREATHE DUST/ FUME/ GAS/ MIST/
	VAPOURS/ SPRAY.
DAC 4	WARLED THO OHOUN AFTER HANDING

WASH SKIN THOROUGHLY AFTER HANDLING. P264 P270 DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT.

P272 CONTAMINATED WORK CLOTHING SHOULD NOT BE ALLOWED OUT OF THE WORKPLACE.

P273 AVOID RELEASE TO THE ENVIRONMENT. P280 WEAR EYE PROTECTION/ FACE PROTECTION. P280 WEAR PROTECTIVE GLOVES/ PROTECTIVE

CLOTHING.

P281 USE PERSONAL PROTECTIVE EQUIPMENT AS

REQUIRED.

IF SWALLOWED: CALL A POISON CENTER OR P301 + P312 + P330

DOCTOR/ PHYSICIAN IF YOU FEEL UNWELL.

RINSE MOUTH.

P302 + P352IF ON SKIN: WASH WITH PLENTY OF SOAP AND

WATER.

P302 + P352 + P312 IF ON SKIN: WASH WITH PLENTY OF SOAP AND

WATER. CALL A POISON CENTER OR DOCTOR/

PHYSICIAN IF YOU FEEL UNWELL.

P305 + P351 + P338	IF IN EYES: RINSE CAUTIOUSLY WITH WATER
	FOR SEVERAL MINUTES, REMOVE CONTACT
	LENSES, IF PRESENT AND EASY TO DO.
	CONTINUE RINSING.
P308 + P313	IF EXPOSED OR CONCERNED: GET MEDICAL
1300 - 1313	ADVICE/ATTENTION.
P333 + P313	IF SKIN IRRITATION OR RASH OCCURS: GET
1333 . 1313	MEDICAL ADVICE/ ATTENTION
P337 + P313	IF EYE IRRITATION PERSISTS: GET MEDICAL
1337 . 1313	ADVICE/ATTENTION.
P362	TAKE OFF CONTAMINATED CLOTHING AND
1302	WASH BEFORE REUSE.
P390	ABSORB SPILLAGE TO PREVENT MATERIAL
1370	DAMAGE
P391	COLLECT SPILLAGE.
P405	STORE LOCKED UP.
P406	STORE IN CORROSIVE RESISTANT STAINLESS
1 400	STEEL CONTAINER WITH A RESISTANT INNER
	LINER
P501	DISPOSE OF CONTENTS/ CONTAINER TO AN
P301	
HAZARDZNOT	APPROVED WASTE DISPOSAL PLANT.
HAZARDS NOT	NONE
OTHERWISE	
CLASSIFIED (HNOC)	
OR NOT COVERED BY	
GHS	

# SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

MF:  $NH_2OH \cdot HC1$ 

MW: 69.49

CAS-NO. 5470-11-1

PURITY:  $\geq 99\%$  (Titration)

# **HAZARDOUS COMPONENTS**

COMPONENT	CLASSIFICATION	CONCENTRATION	
Hydroxylamine hydrochloride			
	MET. CORR. 1; ACUTE TOX. 4;	<= 100 %	
	SKIN IRRIT. 2; EYE IRRIT. 2A;		
	SKIN SENS. 1; CARC. 2; STOT		
	RE 2; AQUATIC ACUTE 1;		
	AQUATIC CHRONIC 1; H290,		
	H302 + H312, H315, H317, H319,		
	H351, H373, H410		

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

#### **SECTION 4. FIRST-AID MEASURES**

DESCRIPTION OF FIRST AID MEASURES

GENERAL ADVICE MOVE OUT OF DANGEROUS AREA.CONSULT A

PHYSICIAN. SHOW THIS SAFETY DATA SHEET TO THE

DOCTOR IN ATTENDANCE.

IF INHALED IF BREATHED IN, MOVE PERSON INTO FRESH AIR. IF

NOT BREATHING, GIVE ARTIFICIAL RESPIRATION.

CONSULT A PHYSICIAN.

IN CASE OF SKIN WASH OFF WITH SOAP AND PLENTY OF WATER.

CONTACT CONSULT A PHYSICIAN.

IN CASE OF EYE RINSE THOROUGHLY WITH PLENTY OF WATER FOR AT

CONTACT LEAST 15 MINUTES AND CONSULT A PHYSICIAN.

IF SWALLOWED NEVER GIVE ANYTHING BY MOUTH TO AN

UNCONSCIOUS PERSON. RINSE MOUTH WITH WATER.

CONSULT A PHYSICIAN.

MOST IMPORTANT THE MOST IMPORTANT KNOWN SYMPTOMS AND SYMPTOMS AND EFFECTS ARE DESCRIBED IN THE LABELLING (SEE

EFFECTS, BOTH ACUTE SECTION 2.2) AND/OR IN SECTION 11

AND DELAYED

INDICATION OF ANY

IMMEDIATE MEDICAL ATTENTION AND SPECIAL

TREATMENT NEEDED

NO DATA AVAILABLE

#### SECTION 5. FIRE AND EXPLOSION DATA

#### **EXTINGUISHING MEDIA**

SUITABLE EXTINGUISHING USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY

MEDIA CHEMICAL OR CARBON DIOXIDE.

SPECIAL HAZARDS NITROGEN OXIDES (NOX), HYDROGEN CHLORIDE GAS ARISING FROM THE CONTAINER EXPLOSION MAY OCCUR UNDER FIRE

SUBSTANCE OR MIXTURE CONDITIONS.

ADVICE FOR WEAR SELF-CONTAINED BREATHING APPARATUS FOR

FIREFIGHTERS FIREFIGHTING IF NECESSARY.

FURTHER INFORMATION MAY EXPLODE WHEN HEATED.

# SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, WEAR RESPIRATORY PROTECTION. AVOID DUST

PROTECTIVE EQUIPMENT FORMATION. AVOID BREATHING VAPOURS, MIST OR AND EMERGENCY GAS. ENSURE ADEQUATE VENTILATION. EVACUATE PROCEDURES PERSONNEL TO SAFE AREAS. AVOID BREATHING DUST.

FOR PERSONAL PROTECTION SEE SECTION 8.

ENVIRONMENTAL PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE PRECAUTIONS TO DO SO. DO NOT LET PRODUCT ENTER DRAINS.

DISCHARGE INTO THE ENVIRONMENT MUST BE

AVOIDED.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP PICK UP AND ARRANGE DISPOSAL WITHOUT CREATING DUST. SWEEP UP AND SHOVEL. KEEP IN SUITABLE, CLOSED CONTAINERS FOR DISPOSAL.

REFERENCE TO OTHER

**SECTIONS** 

FOR DISPOSAL SEE SECTION 13.

# SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE AVOID CONTACT WITH SKIN AND EYES. AVOID

HANDLING FORMATION OF DUST AND AEROSOLS.FURTHER

PROCESSING OF SOLID MATERIALS MAY RESULT IN THE FORMATION OF COMBUSTIBLE DUSTS. THE POTENTIAL FOR COMBUSTIBLE DUST FORMATION SHOULD BE TAKEN INTO CONSIDERATION BEFORE

ADDITIONAL PROCESSING OCCURS.

PROVIDE APPROPRIATE EXHAUST VENTILATION AT

PLACES WHERE DUST IS FORMED. FOR PRECAUTIONS SEE SECTION 2.2.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES KEEP CONTAINER TIGHTLY CLOSED IN A DRY AND

WELL-VENTILATED PLACE.

AIR AND MOISTURE SENSITIVE.

STORAGE CLASS (TRGS 510): OTHER EXPLOSIVE

CONTAINS NO SUBSTANCES WITH OCCUPATIONAL

HAZARDOUS MATERIALS

SPECIFIC END USE(S) APART FROM THE USES MENTIONED IN SECTION 1.2

NO OTHER SPECIFIC USES ARE STIPULATED

# SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

# **CONTROL PARAMETERS**

COMPONENTS WITH WORKPLACE CONTROL

EXPOSURE LIMIT VALUES.

**PARAMETERS** 

# **EXPOSURE CONTROLS**

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

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION FACE SHIELD AND SAFETY GLASSES 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.

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.

WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A FULL-FACE PARTICLE RESPIRATOR TYPE N100 (US) OR TYPE P3 (EN 143) 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).

PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.

BODY PROTECTION

RESPIRATORY PROTECTION

CONTROL OF ENVIRONMENTAL EXPOSURE

# SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE White crystal, powder or chunks

ODOUR NO DATA AVAILABLE
ODOUR THRESHOLD NO DATA AVAILABLE
PH 2.5 - 3.5 AT 50 G/L AT 20 C

MELTING 151 °C (Approx.)

POINT/FREEZING POINT

BOILING POINT FLASH POINT

EVAPORATION RATE NO DATA AVAILABLE FLAMMABILITY (SOLID, NO DATA AVAILABLE

GAS)

UPPER/LOWER NO DATA AVAILABLE

FLAMMABILITY OR EXPLOSIVE LIMITS

VAPOUR PRESSURE NO DATA AVAILABLE VAPOUR DENSITY NO DATA AVAILABLE

RELATIVE DENSITY 1.67

WATER SOLUBILITY SOLUBLE

PARTITION COEFFICIENT: NO DATA AVAILABLE

N- OCTANOL/WATER

AUTO-IGNITION NO DATA AVAILABLE

TEMPERATURE

DECOMPOSITION > 150 C - HEATING MAY CAUSE AN EXPLOSION.

TEMPERATURE

VISCOSITY

EXPLOSIVE PROPERTIES

OXIDIZING PROPERTIES

OTHER SAFETY

NO DATA AVAILABLE

NO DATA AVAILABLE

NO DATA AVAILABLE

NO DATA AVAILABLE

INFORMATION

# SECTION 10. STABILITY AND REACTIVITY

REACTIVITY NO DATA AVAILABLE

CHEMICAL STABILITY STABLE UNDER RECOMMENDED STORAGE

CONDITIONS.

POSSIBILITY OF NO DATA AVAILABLE

HAZARDOUS REACTIONS

CONDITIONS TO AVOID AIR EXPOSURE TO MOISTURE. MAY BE UNSTABLE AT

TEMPERATURES ABOVE: 75 C

INCOMPATIBLE STRONG OXIDIZING AGENTS, PHOSPHOROUS

MATERIALS PENTACHLORIDE, CALCIUM, ANHYDROUS COPPER(II)

SULFATE

HAZARDOUS OTHER DECOMPOSITION PRODUCTS - NO DATA

DECOMPOSITION AVAILABLE

PRODUCTS IN THE EVENT OF FIRE: SEE SECTION 5

#### SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY LD50 ORAL - RAT - 600 MG/KG

INHALATION: NO DATA AVAILABLE

DERMAL: NO DATA AVAILABLE

NO DATA AVAILABLE

**SKIN** NO DATA AVAILABLE

CORROSION/IRRITATION

**SERIOUS EYE** 

NO DATA AVAILABLE

DAMAGE/EYE IRRITATION RESPIRATORY OR SKIN

**SENSITISATION** 

**GERM CELL RAT** 

MUTAGENICITY **EMBRYO** 

MORPHOLOGICAL TRANSFORMATION.

HAMSTER LUNGS

SISTER CHROMATID EXCHANGE

**CARCINOGENICITY** SUSPECTED HUMAN CARCINOGENS

NO COMPONENT OF THIS PRODUCT PRESENT AT IARC:

LEVELS GREATER THAN OR EQUAL TO 0.1% IS

IDENTIFIED AS PROBABLE, POSSIBLE OR CONFIRMED

HUMAN CARCINOGEN BY IARC.

NO COMPONENT OF THIS PRODUCT PRESENT AT ACGIH:

> LEVELS GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS A CARCINOGEN OR POTENTIAL

CARCINOGEN BY ACGIH.

NO COMPONENT OF THIS PRODUCT PRESENT AT NTP:

> 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.

REPRODUCTIVE TOXICITY

SPECIFIC TARGET ORGAN

NO DATA AVAILABLE

TOXICITY - SINGLE

**EXPOSURE** 

NO DATA AVAILABLE

SPECIFIC TARGET ORGAN TOXICITY - REPEATED

MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE.

**EXPOSURE** 

ASPIRATION HAZARD NO DATA AVAILABLE ADDITIONAL INFORMATION

RTECS: NC3675000

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE

NOT BEEN THOROUGHLY INVESTIGATED.

LIVER - IRREGULARITIES - BASED ON HUMAN

**EVIDENCE** 

# SECTION 12. ECOLOGICAL INFORMATION

**TOXICITY** 

TOXICITY TO FISH LC50 - LEUCISCUS IDUS (GOLDEN ORFE) - 1 - 10 MG/L

NO DATA AVAILABLE

- 48.0 H

PERSISTENCE AND

DEGRADABILITY

BIOACCUMULATIVE NO DATA AVAILABLE

**POTENTIAL** 

MOBILITY IN SOIL NO DATA AVAILABLE

RESULTS OF PBT AND VPVB  $\;\;$  PBT/VPVB ASSESSMENT NOT AVAILABLE AS

ASSESSMENT CHEMICAL SAFETY ASSESSMENT NOT

REQUIRED/NOT CONDUCTED

OTHER ADVERSE EFFECTS VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING

EFFECTS.

AN ENVIRONMENTAL HAZARD CANNOT BE EXCLUDED IN THE EVENT OF UNPROFESSIONAL

HANDLING OR DISPOSAL.

# SECTION 13. DISPOSAL CONSIDERATIONS

# WASTE TREATMENT METHODS

PRODUCT 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. OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO A LICENSED DISPOSAL COMPANY.

DISPOSE OF AS UNUSED PRODUCT.

CONTAMINATED PACKAGING

# **SECTION 14.** TRANSPORT INFORMATION

DOT (US)

PROPER SHIPPING NAME: CORROSIVE SOLIDS, TOXIC, N.O.S. (Hydroxylamine

hydrochloride)

UN NUMBER: 2923 CLASS: 8 (6.1) PACKING GROUP: III POISON INHALATION NO

HAZARD: IMDG

PROPER SHIPPING NAME: CORROSIVE SOLID, TOXIC, N.O.S. (Hydroxylamine

hydrochloride)

UN NUMBER: 2923
CLASS: 8 (6.1)
PACKING GROUP: III
EMS-NO: F-A, S-B
MARINE POLLUTANT YES

**IATA** 

PROPER SHIPPING NAME: CORROSIVE SOLID, TOXIC, N.O.S. (Hydroxylamine

hydrochloride)

UN NUMBER: 2923 CLASS: 8 (6.1) PACKING GROUP: III

# SECTION 15. REGULATORY INFORMATION

SARA 302 COMPONENTS NO CHEMICALS IN THIS MATERIAL ARE SUBJECT TO

THE REPORTING REQUIREMENTS OF SARA TITLE III,

SECTION 302.

SARA 313 COMPONENTS THIS MATERIAL DOES NOT CONTAIN ANY CHEMICAL

COMPONENTS WITH KNOWN CAS NUMBERS THAT EXCEED THE THRESHOLD (DEMINIMIS) REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313.

SARA 311/312 HAZARDS ACUTE HEALTH HAZARD, CHRONIC HEALTH HAZARD NO COMPONENTS ARE SUBJECT TO THE

TO KNOW COMPONENTS MASSACHUSETTS RIGHT TO KNOW ACT.

PENNSYLVANIA RIGHT TO KNOW COMPONENTS

CAS # REVISION DATE

Hydroxylamine hydrochloride 5470-11-1

NEW JERSEY RIGHT TO KNOW COMPONENTS

CAS # REVISION DATE

Hydroxylamine hydrochloride 5470-11-1

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.

# **SECTION 16. OTHER INFORMATION**

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

ACUTE TOX. ACUTE TOXICITY

AQUATIC ACUTE ACUTE AQUATIC TOXICITY
AQUATIC CHRONIC CHRONIC AQUATIC TOXICITY

CARC. CARCINOGENICITY EYE IRRIT. EYE IRRITATION

H290 MAY BE CORROSIVE TO METALS.

H302 HARMFUL IF SWALLOWED.

H302 + H312 HARMFUL IF SWALLOWED OR IN CONTACT WITH SKIN

H312 HARMFUL IN CONTACT WITH SKIN.

H315 CAUSES SKIN IRRITATION.

H317 MAY CAUSE AN ALLERGIC SKIN REACTION.

H319 CAUSES SERIOUS EYE IRRITATION. H351 SUSPECTED OF CAUSING CANCER.

H373 MAY CAUSE DAMAGE TO ORGANS THROUGH

PROLONGED OR REPEATED EXPOSURE.

**HMIS RATING** 

HEALTH HAZARD: 3 CHRONIC HEALTH \*

HAZARD:

FLAMMABILITY: 0 PHYSICAL HAZARD 1 NFPA RATING

HEALTH HAZARD: 3
FIRE HAZARD: 0
REACTIVITY HAZARD: 1
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 GOVERNMENENTAL INDUSTRIAL

**HYGINISTS** 

CAS: CHEMICAL ABSTRACTS SERIVE REGISTRY NUMBER
OSHA: OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

PEL: PERMISSIBLE EXPOSURE LIMIT (OSHA)
TLV: THRESHOLD LIMIT VALUE (ACGIH)

# IMPORTANT:

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