

# *Chem-Impex International Inc.*

---

Tel: (630) 766-2112

E-mail: [sales@chemimpex.com](mailto:sales@chemimpex.com)

**Shipping and Correspondence:**

935 Dillon Drive  
Wood Dale, IL 60191 USA

Fax: (630) 766-2218

Web site: [www.chemimpex.com](http://www.chemimpex.com)

**Manufacturing site:**

825 Dillon Drive  
Wood Dale, IL 60191 USA

## SAFETY DATA SHEET

---

### SECTION 1. CHEMICAL IDENTIFICATION

---

CATALOG #:	40897
NAME:	Ethylenediamine anhydrous
SYNONYMS:	1,2-Diaminoethane anhydrous
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)

FLAMMABLE LIQUIDS (CATEGORY 3), H226  
ACUTE TOXICITY, ORAL (CATEGORY 4), H302  
ACUTE TOXICITY, INHALATION (CATEGORY 4), H332  
ACUTE TOXICITY, DERMAL (CATEGORY 3), H311  
SKIN CORROSION (CATEGORY 1B), H314

SERIOUS EYE DAMAGE (CATEGORY 1), H318  
RESPIRATORY SENSITIZATION (CATEGORY 1), H334  
SKIN SENSITIZATION (CATEGORY 1), H317  
SHORT-TERM (ACUTE) AQUATIC HAZARD (CATEGORY 2), H401  
LONG-TERM (CHRONIC) AQUATIC HAZARD (CATEGORY 3), H412

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)**

H226	FLAMMABLE LIQUID AND VAPOUR.
H302 + H332	HARMFUL IF SWALLOWED OR IF INHALED.
H311	TOXIC IN CONTACT WITH SKIN.
H314	CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
H317	MAY CAUSE AN ALLERGIC SKIN REACTION.
H318	CAUSES SERIOUS EYE DAMAGE.
H334	MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED.
H401	TOXIC TO AQUATIC LIFE.
H412	HARMFUL TO AQUATIC LIFE WITH LONG LASTING EFFECTS.

**PRECAUTIONARY STATEMENT(S)**

P210	KEEP AWAY FROM HEAT/SPARKS/OPEN FLAMES/HOT SURFACES. NO SMOKING.
P233	KEEP CONTAINER TIGHTLY CLOSED.
P240	GROUND/BOND CONTAINER AND RECEIVING EQUIPMENT.
P241	USE EXPLOSION-PROOF ELECTRICAL/ VENTILATING/ LIGHTING EQUIPMENT.
P242	USE ONLY NON-SPARKING TOOLS.
P243	TAKE PRECAUTIONARY MEASURES AGAINST STATIC DISCHARGE.
P261	AVOID BREATHING DUST/ FUME/ GAS/ MIST/ VAPOURS/ SPRAY.
P264	WASH SKIN THOROUGHLY AFTER HANDLING.
P270	DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT.
P271	USE ONLY OUTDOORS OR IN A WELL-VENTILATED AREA.
P272	CONTAMINATED WORK CLOTHING MUST NOT BE ALLOWED OUT OF THE WORKPLACE.
P273	AVOID RELEASE TO THE ENVIRONMENT.
P280	WEAR PROTECTIVE GLOVES/ PROTECTIVE CLOTHING/ EYE PROTECTION/ FACE PROTECTION.
P285	IN CASE OF INADEQUATE VENTILATION WEAR RESPIRATORY PROTECTION.
P301 + P312 + P330	IF SWALLOWED: CALL A POISON CENTER/DOCTOR IF YOU FEEL UNWELL. RINSE MOUTH.
P301 + P330 + P331	IF SWALLOWED: RINSE MOUTH. DO NOT INDUCE VOMITING.
P303 + P361 + P353	IF ON SKIN (OR HAIR): TAKE OFF IMMEDIATELY ALL CONTAMINATED CLOTHING. RINSE SKIN WITH

P304 + P340 + P310	WATER/SHOWER. IF INHALED: REMOVE PERSON TO FRESH AIR AND KEEP COMFORTABLE FOR BREATHING. IMMEDIATELY CALL A POISON CENTER/DOCTOR.
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/DOCTOR.
P333 + P313	IF SKIN IRRITATION OR RASH OCCURS: GET MEDICAL ADVICE/ ATTENTION.
P342 + P311	IF EXPERIENCING RESPIRATORY SYMPTOMS: CALL A POISON CENTER/ DOCTOR.
P363	WASH CONTAMINATED CLOTHING BEFORE REUSE.
P370 + P378	IN CASE OF FIRE: USE DRY SAND, DRY CHEMICAL OR ALCOHOL-RESISTANT FOAM FOR EXTINCTION.
P403 + P233	STORE IN A WELL-VENTILATED PLACE. KEEP CONTAINER TIGHTLY CLOSED.
P405	STORE LOCKED UP.
P501	DISPOSE OF CONTENTS/ CONTAINER TO AN APPROVED WASTE DISPOSAL PLANT.
<b>HAZARDS NOT OTHERWISE CLASSIFIED (HNOC) OR NOT COVERED BY GHS</b>	NONE

---

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

---

MF:	C <sub>2</sub> H <sub>8</sub> N <sub>2</sub>
MW:	60.10
CAS-NO.	107-15-3
PURITY:	≥ 99.5% (GC)

#### HAZARDOUS COMPONENTS

COMPONENT	CLASSIFICATION	CONCENTRATION
<b>Ethylenediamine anhydrous</b>		
	FLAM. LIQ. 3; ACUTE TOX. 4; ACUTE TOX. 3; SKIN CORR. 1B; EYE DAM. 1; RESP. SENS. 1; SKIN SENS. 1; AQUATIC ACUTE 3; AQUATIC CHRONIC 3; H226, H302, H332, H311, H314, H318, H334, H317, H402, H412	≤ 100 %

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**

<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. TAKE VICTIM IMMEDIATELY TO HOSPITAL. 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
<b>INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED</b>	NO DATA AVAILABLE

---

**SECTION 5. FIRE AND EXPLOSION DATA**

---

**EXTINGUISHING MEDIA**

<b>SUITABLE EXTINGUISHING MEDIA</b>	USE WATER SPRAY, ALCOHOL-RESISTANT FOAM, DRY CHEMICAL OR CARBON DIOXIDE.
<b>SPECIAL HAZARDS ARISING FROM THE</b>	CARBON OXIDES, NITROGEN OXIDES (NOX)

<b>SUBSTANCE OR MIXTURE</b>	FLASH BACK POSSIBLE OVER CONSIDERABLE DISTANCE., CONTAINER EXPLOSION MAY OCCUR UNDER FIRE CONDITIONS., VAPOURS MAY FORM EXPLOSIVE MIXTURE WITH AIR.
<b>ADVICE FOR FIREFIGHTERS</b>	WEAR SELF-CONTAINED BREATHING APPARATUS FOR FIREFIGHTING IF NECESSARY.
<b>FURTHER INFORMATION</b>	USE WATER SPRAY TO COOL UNOPENED CONTAINERS.

---

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

---

<b>PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES</b>	WEAR RESPIRATORY PROTECTION. AVOID BREATHING VAPOURS, MIST OR GAS. ENSURE ADEQUATE VENTILATION. REMOVE ALL SOURCES OF IGNITION. EVACUATE PERSONNEL TO SAFE AREAS. BEWARE OF VAPOURS ACCUMULATING TO FORM EXPLOSIVE CONCENTRATIONS. VAPOURS CAN ACCUMULATE IN LOW AREAS. FOR PERSONAL PROTECTION SEE SECTION 8.
<b>ENVIRONMENTAL PRECAUTIONS</b>	PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO. DO NOT LET PRODUCT ENTER DRAINS. DISCHARGE INTO THE ENVIRONMENT MUST BE AVOIDED.
<b>METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP</b>	CONTAIN SPILLAGE, AND THEN COLLECT WITH AN ELECTRICALLY PROTECTED VACUUM CLEANER OR BY WETBRUSHING AND PLACE IN CONTAINER FOR DISPOSAL ACCORDING TO LOCAL REGULATIONS (SEE SECTION 13).
<b>REFERENCE TO OTHER SECTIONS</b>	FOR DISPOSAL SEE SECTION 13.

---

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

---

<b>PRECAUTIONS FOR SAFE HANDLING</b>	AVOID CONTACT WITH SKIN AND EYES. AVOID INHALATION OF VAPOUR OR MIST. KEEP AWAY FROM SOURCES OF IGNITION - NO SMOKING. TAKE MEASURES TO PREVENT THE BUILD UP OF ELECTROSTATIC CHARGE. 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.

AIR AND MOISTURE SENSITIVE. HANDLE AND STORE UNDER INERT GAS.

Store at RT

**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 PARAMETERS

COMPONENT	CAS-NO.	VALUE	CONTROL PARAMETERS	BASIS
Ethylenediamine anhydrous	107-15-3	TWA	10 PPM	USA. ACGIH THRESHOLD LIMIT VALUES (TLV)
	REMARKS	NOT CLASSIFIABLE AS A HUMAN CARCINOGEN DANGER OF CUTANEOUS ABSORPTION		
		TWA	10 PPM 25 MG/M3	USA. OCCUPATIONAL EXPOSURE LIMITS (OSHA) - TABLE Z-1 LIMITS FOR AIR CONTAMINANTS
		THE VALUE IN MG/M3 IS APPROXIMATE.		
		TWA	10 PPM 25 MG/M3	USA. NIOSH RECOMMENDED EXPOSURE LIMITS
		PEL	10 PPM 25 MG/M3	CALIFORNIA PERMISSIBLE EXPOSURE LIMITS FOR CHEMICAL CONTAMINANTS

### EXPOSURE CONTROLS

**APPROPRIATE ENGINEERING CONTROLS** AVOID CONTACT WITH SKIN, EYES AND CLOTHING. WASH HANDS BEFORE BREAKS AND IMMEDIATELY AFTER HANDLING THE PRODUCT.

### 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: BUTYL-RUBBER

MINIMUM LAYER THICKNESS: 0.3 MM

BREAK THROUGH TIME: 480 MIN

MATERIAL TESTED: BUTOJECT (KCL 897, SIZE M)

**SPLASH CONTACT**

MATERIAL: NATURE LATEX/CHLOROPRENE

MINIMUM LAYER THICKNESS: 0.6 MM

BREAK THROUGH TIME: 72 MIN

MATERIAL TESTED: LAPREN (KCL 706, 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, FLAME RETARDANT ANTISTATIC PROTECTIVE CLOTHING., 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 FULLFACE 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**

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

---

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

---

**INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE	Colorless clear liquid
ODOUR	NO DATA AVAILABLE
ODOUR THRESHOLD	NO DATA AVAILABLE
PH	12.2 AT 110 G/L AT 20 °C
MELTING	10 °C (Lit.)
POINT/FREEZING POINT	
INITIAL BOILING POINT	
AND BOILING RANGE	
FLASH POINT	34 °C
EVAPORATION RATE	NO DATA AVAILABLE
FLAMMABILITY (SOLID, GAS)	NO DATA AVAILABLE
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	UPPER EXPLOSION LIMIT: 16 %(V) LOWER EXPLOSION LIMIT: 2.7 %(V)
VAPOUR PRESSURE	13 HPA AT 20 °C
VAPOUR DENSITY	2.07 - (AIR = 1.0)
RELATIVE DENSITY	0.9 g/mL (Lit.)
WATER SOLUBILITY	SOLUBLE
PARTITION COEFFICIENT: N- OCTANOL/WATER	LOG POW: -2.04
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**

RELATIVE VAPOR DENSITY	2.07 - (AIR = 1.0)
---------------------------	--------------------

---

**SECTION 10. STABILITY AND REACTIVITY**

---

<b>REACTIVITY</b>	NO DATA AVAILABLE
<b>CHEMICAL STABILITY</b>	ABSORBS CARBON DIOXIDE (CO <sub>2</sub> ) FROM AIR. STABLE UNDER RECOMMENDED STORAGE CONDITIONS.
<b>POSSIBILITY OF HAZARDOUS REACTIONS</b>	NO DATA AVAILABLE



<b>CONDITIONS TO AVOID</b>	AIR EXPOSURE TO MOISTURE HEAT, FLAMES AND SPARKS.
<b>INCOMPATIBLE MATERIALS</b>	OXIDIZING AGENTS, PHOSPHORUS HALIDES, ALDEHYDES, ORGANIC HALIDES
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	HAZARDOUS DECOMPOSITION PRODUCTS FORMED UNDER FIRE CONDITIONS. - CARBON OXIDES, NITROGEN OXIDES (NOX) OTHER DECOMPOSITION PRODUCTS - NO DATA AVAILABLE IN THE EVENT OF FIRE: SEE SECTION 5

---

## SECTION 11. TOXICOLOGICAL INFORMATION

---

### INFORMATION ON TOXICOLOGICAL EFFECTS

<b>ACUTE TOXICITY</b>	LD50 ORAL - RAT - MALE AND FEMALE - 866 MG/KG (OECD TEST GUIDELINE 401)  LC50 INHALATION - RAT - MALE - 4 H - 14.7 MG/L REMARKS: (ECHA)  LD50 DERMAL - RABBIT - MALE - 560 MG/KG REMARKS: (ECHA)  NO DATA AVAILABLE
<b>SKIN CORROSION/IRRITATION</b>	SKIN RABBIT RESULT: CORROSIVE - 15 MIN REMARKS: (ECHA) CAUSES POORLY HEALING WOUNDS.
<b>SERIOUS EYE DAMAGE/EYE IRRITATION</b>	EYES RABBIT RESULT: CORROSIVE REMARKS: (ECHA) CAUSES SERIOUS EYE DAMAGE.
<b>RESPIRATORY OR SKIN SENSITISATION</b>	MAXIMISATION TEST - GUINEA PIG RESULT: POSITIVE REMARKS: (ECHA)

**GERM CELL  
MUTAGENICITY**

AMES TEST  
SALMONELLA TYPHIMURIUM  
RESULT: POSITIVE  
IN VITRO MAMMALIAN CELL GENE MUTATION TEST  
CHINESE HAMSTER OVARY CELLS  
RESULT: NEGATIVE  
(ECHA)  
SISTER CHROMATID EXCHANGE ASSAY  
CHINESE HAMSTER OVARY CELLS  
RESULT: NEGATIVE  
(ECHA)  
UNSCHEDULED DNA SYNTHESIS ASSAY  
RAT HEPATOCYTES  
RESULT: NEGATIVE  
(ECHA)  
MUTAGENICITY (MAMMAL CELL TEST): CHROMOSOME  
ABERRATION.  
HUMAN LYMPHOCYTES  
RESULT: NEGATIVE  
(ECHA)  
  
RAT MALE  
RESULT: NEGATIVE  
(ECHA)

**CARCINOGENICITY**

IARC: NO COMPONENT OF THIS PRODUCT PRESENT AT LEVELS  
GREATER THAN OR EQUAL TO 0.1% IS IDENTIFIED AS  
PROBABLE, POSSIBLE OR CONFIRMED HUMAN  
CARCINOGEN BY IARC.  
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 ON OSHA S LIST OF  
REGULATED CARCINOGENS.

**REPRODUCTIVE TOXICITY** NO DATA AVAILABLE

**SPECIFIC TARGET ORGAN  
TOXICITY - SINGLE  
EXPOSURE** NO DATA AVAILABLE

**SPECIFIC TARGET ORGAN  
TOXICITY - REPEATED  
EXPOSURE** NO DATA AVAILABLE

**ASPIRATION HAZARD** NO DATA AVAILABLE

**ADDITIONAL  
INFORMATION**

REPEATED DOSE TOXICITY - MOUSE - MALE - DERMAL -  
NO OBSERVED ADVERSE EFFECT LEVEL - 8.3 MG/KG  
(ECHA)

REPEATED DOSE TOXICITY - RAT - MALE AND FEMALE -  
INHALATION (VAPOUR) - 6 WEEKS - NO OBSERVED  
ADVERSE EFFECT LEVEL - 48 MG/KG - LOWEST  
OBSERVED ADVERSE EFFECT LEVEL - 107 MG/KG (ECHA)

REPEATED DOSE TOXICITY - RAT - MALE AND FEMALE -  
ORAL - 3 MONTHS - NO OBSERVED ADVERSE EFFECT  
LEVEL - 22 MG/KG - LOWEST OBSERVED ADVERSE EFFECT  
LEVEL - 114 MG/KG

RTECS: KH8575000  
VOMITING, DIARRHOEA, ABDOMINAL PAIN

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	SEMI-STATIC TEST LC50 - POECILIA RETICULATA (GUPPY) - 640 MG/L - 96 H (DIRECTIVE 67/548/EEC, ANNEX V, C.1.)
TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES	STATIC TEST EC50 - DAPHNIA MAGNA (WATER FLEA) - 16.7 MG/L - 48 H (DIRECTIVE 67/548/EEC, ANNEX V, C.2.)
TOXICITY TO ALGAE	STATIC TEST ERC50 - PSEUDOKIRCHNERIELLA SUBCAPITATA (ALGAE) - 645 MG/L - 72 H (DIRECTIVE 67/548/EEC, ANNEX V, C.3.)
TOXICITY TO BACTERIA	STATIC TEST EC50 - BACTERIA - 3.2 MG/L - 2 H REMARKS: (ECHA)

**PERSISTENCE AND DEGRADABILITY**

BIODEGRADABILITY	AEROBIC - EXPOSURE TIME 28 D RESULT: 95 % - READILY BIODEGRADABLE.
------------------	---

**BIOACCUMULATIVE  
POTENTIAL**

NO DATA AVAILABLE

**MOBILITY IN SOIL**

NO DATA AVAILABLE

**RESULTS OF PBT AND VPVB ASSESSMENT** PBT/VPVB ASSESSMENT NOT AVAILABLE AS CHEMICAL SAFETY ASSESSMENT NOT REQUIRED/NOT CONDUCTED

**OTHER ADVERSE EFFECTS** AN ENVIRONMENTAL HAZARD CANNOT BE EXCLUDED IN THE EVENT OF UNPROFESSIONAL HANDLING OR DISPOSAL.  
TOXIC TO AQUATIC LIFE.  
AVOID RELEASE TO THE ENVIRONMENT.

---

## **SECTION 13. DISPOSAL CONSIDERATIONS**

---

### **WASTE TREATMENT METHODS**

**PRODUCT** BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER BUT EXERT EXTRA CARE IN IGNITING AS THIS MATERIAL IS HIGHLY FLAMMABLE. OFFER SURPLUS AND NON-RECYCLABLE SOLUTIONS TO A LICENSED DISPOSAL COMPANY. CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE OF THIS MATERIAL.

**CONTAMINATED PACKAGING** DISPOSE OF AS UNUSED PRODUCT.

---

## **SECTION 14. TRANSPORT INFORMATION**

---

**DOT (US)**  
PROPER SHIPPING NAME: ETHYLENEDIAMINE  
UN NUMBER: 1604  
CLASS: 8 (3)  
PACKING GROUP: II  
REPORTABLE QUANTITY (RQ): 5000 LBS  
POISON INHALATION HAZARD: NO

**IMDG**  
PROPER SHIPPING NAME: ETHYLENEDIAMINE  
UN NUMBER: 1604  
CLASS: 8 (3)  
PACKING GROUP: II  
EMS-NO: F-E, S-C

**IATA**  
PROPER SHIPPING NAME: ETHYLENEDIAMINE  
UN NUMBER: 1604

CLASS: 8 (3)  
PACKING GROUP: II

---

## SECTION 15. REGULATORY INFORMATION

---

**SARA 302 COMPONENTS** THE FOLLOWING COMPONENTS ARE SUBJECT TO REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 302:

	CAS-NO.	REVISION DATE
Ethylenediamine anhydrous	107-15-3	07/01/2007

**SARA 313 COMPONENTS** THIS MATERIAL DOES NOT CONTAIN ANY CHEMICAL COMPONENTS WITH KNOWN CAS NUMBERS THAT EXCEED THE THRESHOLD (DE MINIMIS) REPORTING LEVELS ESTABLISHED BY SARA TITLE III, SECTION 313.

**SARA 311/312 HAZARDS** FIRE HAZARD, ACUTE HEALTH HAZARD, CHRONIC HEALTH HAZARD

### MASSACHUSETTS RIGHT TO KNOW COMPONENTS

NO COMPONENTS ARE SUBJECT TO THE MASSACHUSETTS RIGHT TO KNOW ACT.

### PENNSYLVANIA RIGHT TO KNOW COMPONENTS

	CAS-NO.	REVISION DATE
Ethylenediamine anhydrous	107-15-3	07/01/2007

---

## SECTION 16. OTHER INFORMATION

---

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

H226	FLAMMABLE LIQUID AND VAPOUR.
H302 + H332	HARMFUL IF SWALLOWED OR IF INHALED.
H311	TOXIC IN CONTACT WITH SKIN.
H314	CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.
H317	MAY CAUSE AN ALLERGIC SKIN REACTION.
H318	CAUSES SERIOUS EYE DAMAGE.
H334	MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED.
H401	TOXIC TO AQUATIC LIFE.
H412	HARMFUL TO AQUATIC LIFE WITH LONG LASTING EFFECTS.

### MSDS LEGEND

MW:	MOLECULAR WEIGHT
MF:	MOLECULAR FORMULA
VOC:	VOLATILE ORGANIC COMPOUNDS

ACGIH: AMERICAN CONFERENCE OF GOVERNMENTAL 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:**

*THE INFORMATION ABOVE IS BELIEVED TO BE ACCURATE AND REPRESENTS THE BEST INFORMATION CURRENTLY AVAILABLE TO US. HOWEVER, WE MAKE NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO SUCH INFORMATION, AND WE ASSUME NO LIABILITY RESULTING FROM ITS USE. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION FOR THEIR PARTICULAR PURPOSES. IN NO EVENT SHALL **CII** BE LIABLE FOR ANY CLAIMS, LOSSES, OR DAMAGES OF ANY THIRD PARTY OR FOR LOST PROFITS OR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES, HOWSOEVER ARISING, EVEN IF **CII** HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.*

VERSION:3.2.

REVISION DATE: 07/01/2020