

SAFETY DATA SHEET

Preparation Date: 12/26/2017

Revision Date: 12/26/2017

Revision Number: G1

1. IDENTIFICATION

Product identifier

Product code: ET112
Product Name: ETHYLENEDIAMINE, REAGENT

Other means of identification

Synonyms: Aethaldiamin (German)
 Aethylenediamin (German)
 Dimethylenediamine
 1,2-Diaminoethan (German)
 1,2-Diamino-ethaan (Dutch)
 1,2-Diaminoethane
 1,2-Diamino-ethano (Italian)
 Ethyleendiamine (Dutch)
 Ethylenediamine
 Ethylene-diamine (French)
 1,2-Ethylenediamine

CAS #: 107-15-3
RTECS # KH8575000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 3
Acute toxicity - Inhalation (Vapors)	Category 4
Skin corrosion/irritation	Category 1 Sub-category B

Serious eye damage/eye irritation	Category 1
Respiratory sensitization	Category 1
Skin sensitization	Category 1
Flammable liquids	Category 3

Label elements

Danger

Hazard statements
 Toxic in contact with skin
 Harmful if swallowed
 Harmful if inhaled
 Causes severe skin burns and eye damage
 May cause allergy or asthma symptoms or breathing difficulties if inhaled
 May cause an allergic skin reaction
 Flammable liquid and vapor



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Harmful to aquatic life with long lasting effects

Precautionary Statements - Prevention

- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Wear protective gloves/protective clothing/eye protection/face protection
- Use only outdoors or in a well-ventilated area
- Do not breathe dust/fume/gas/mist/vapors/spray
- In case of inadequate ventilation wear respiratory protection
- Contaminated work clothing must not be allowed out of the workplace
- Keep away from heat/sparks/open flames/hot surfaces. — No smoking
- Keep container tightly closed
- Ground/bond container and receiving equipment
- Use explosion-proof electrical/ventilating/lighting/.../equipment
- Use only non-sparking tools
- Take precautionary measures against static discharge

Precautionary Statements - Response

- Immediately call a POISON CENTER or doctor/physician*
- In case of fire: Use CO₂, dry chemical, or foam to extinguish.
- 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.
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- Wash contaminated clothing before reuse
- Immediately call a POISON CENTER or doctor/physician

IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Rinse mouth
Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up
Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Ethylenediamine	107-15-3	100

4. FIRST AID MEASURES

First aid measures

General Advice:

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.

Skin Contact:

Wash off immediately with soap and plenty of water. Remove all contaminated clothes and shoes. Continue flushing with plenty of water for at least 15 minutes. Immediate medical attention is required. Call a physician immediately.

Eye Contact:

Flush eyes with water for 15 minutes. Get medical attention. Immediate medical attention is required. Call a physician immediately.

Inhalation:

Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation 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. Immediate medical attention is required. Call a physician immediately.

Ingestion:

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary. If victim is conscious, give water or milk. Immediate medical attention is required. Call a physician or Poison Control Center immediately.

Most important symptoms and effects, both acute and delayed

Symptoms

Severe skin and eye irritation or burns
Possible eye damage
May cause irritation of respiratory tract
May cause coughing and shortness of breath
It may affect the kidneys
May affect the liver
Central nervous system effects
Ataxia
Somnolence
May cause allergic contact dermatitis
May cause an allergic skin reaction
May cause allergic respiratory reaction
May cause allergy or asthma symptoms or breathing difficulties if inhaled

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media:

Carbon dioxide (CO₂). Dry chemical. Water spray mist or foam.

Unsuitable Extinguishing Media:

Do not use a solid (straight) water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Hazardous Combustion Products:

Carbon Monoxide, Carbon Dioxide. Nitrogen Oxides. Ammonia.

Specific hazards:

Flammable. May be ignited by heat, sparks or flames. Vapor may travel considerable distance to source of ignition and flash back. Vapors may form explosive mixtures with air. Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks). Container explosion may occur under fire conditions or when heated. Fire may produce irritating, corrosive and/or toxic gases.

Special Protective Actions for Firefighters

Specific Methods:

Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out. Dike fire-control water for later disposal; do not scatter the material.

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas. In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth).

Methods for cleaning up Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use clean non-sparking tools to collect absorbed material. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Store at room temperature in the original container. Keep in a well-ventilated place. Keep away from heat and sources of ignition. Store in a segregated and approved area. Store away from incompatible materials. Keep container tightly closed.

Incompatible Materials:

Acids
Carbon disulfide
Acrolein
Acrylonitrile
Allyl chloride
Vinyl acetate
Oleum
Mesityl oxide
Epichlorohydrin
ethylene chlorohydrin
Acetic anhydride

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Ethylenediamine	107-15-3	10 ppm TWA 25 mg/m ³ TWA	10 ppm TWA 25 mg/m ³ TWA	10 ppm TWA	None

Canada

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Ethylenediamine	107-15-3	10 ppm TWA 25 mg/m ³ TWA	10 ppm TWA	None	None

Australia and Mexico

Components	CAS-No.	Australia	Mexico
Ethylenediamine	107-15-3	10 ppm TWA 25 mg/m ³ TWA	10 ppm TWA 25 mg/m ³ TWA 3 mg/m ³ STEL

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection:	Goggles or Face-shield
Skin and body protection:	Chemical resistant apron Long sleeved clothing Gloves
Respiratory protection:	Vapor respirator. Be sure to use an approved/certified respirator or equivalent.
Hygiene measures:	Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:

Liquid

Appearance:

Viscous.

Color:

Colorless to pale yellow.

Odor:

Ammonia-like.

Taste

No information available.

Formula:

C₂H₈N₂

Molecular/Formula weight:

60.10

Flammability:

Flammable

Flashpoint (°C/°F):

38-40°C/100-104°F

Product code: ET112

Product name: ETHYLENEDIAMINE,
REAGENT

6 / 14

Flash Point Tested according to: Closed cup	Autoignition Temperature (°C/°F): 385°C/725°F	Lower Explosion Limit (%): 2.5-5.8
Upper Explosion Limit (%): 11.1-12.0	Melting point/range(°C/°F): 8.5°C/47.3°F	Decomposition temperature(°C/°F): No information available
Boiling point/range(°C/°F): 116-118°C/240.8-244.4°F	Bulk density: No information available	Density (g/cm3): No information available
Specific gravity: 0.899	pH: No information available	Vapor pressure @ 20°C (kPa): 1.6 @ 25°C; 1.3-1.4 @ 20°C
Evaporation rate: No information available	Vapor density: 2.07	VOC content (g/L): No information available
Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): log Kow = -2.04	Viscosity: No information available
Miscibility: No information available	Solubility: Very soluble in water Soluble in ethyl alcohol Slightly soluble in Ether	

10. STABILITY AND REACTIVITY

Reactivity

No information available

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Incompatible materials.

Incompatible Materials:

- Acids
- Carbon disulfide
- Acrolein
- Acrylonitrile
- Allyl chloride
- Vinyl acetate
- Oleum
- Mesityl oxide
- Epichlorohydrin
- ethylene chlorohydrin
- Acetic anhydride

Hazardous decomposition products: No information available.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Product code: ET112

Product name: ETHYLENEDIAMINE,
REAGENT

7 / 14

Information on likely routes of exposure

Principal Routes of Exposure:

Skin. Ingestion. Inhalation. Eyes.

Acute Toxicity

Component Information

Ethylenediamine	
CAS-No.	107-15-3

LD50/oral/rat = = 637 mg/kg Oral LD50 Rat(LOLI); 1200 mg/kg (RTECS)

LD50/oral/mouse = 1000 mg/kg

LD50/dermal/rabbit = 560 mg/kg Dermal LD50Rabbit

LD50/dermal/rat = No information available

LC50/inhalation/rat = 4916 - 9832 mg/m³ Inhalation LC50 8 hr.

LC50/inhalation/mouse = No information available

Other LD50 or LC50 information = 470 mg/kg oral LD50 Guinea pig

Product Information

LD50/oral/rat =

VALUE- Acute Tox Oral = 637 mg/kg

LD50/oral/mouse =

Value - Acute Tox Oral = 1000 mg/kg

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = 560 mg/kg

LD50/dermal/rat

VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Causes severe irritation and burns.

Eye Contact: Causes severe irritation and burns. Possible eye damage.

Inhalation May cause irritation of respiratory tract. Symptoms may include coughing and shortness of breath. It may cause pulmonary edema. May cause tingling of the face.

Ingestion May affect behavior/central nervous system (somnolence, ataxia). May cause digestive (gastrointestinal) tract irritation. May cause digestive (gastrointestinal) tract burns.

Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Skin: Sensitizer. May cause allergic skin reaction (allergic contact dermatitis). Prolonged or repeated inhalation may cause respiratory sensitization. Prolonged or repeated inhalation may cause asthma-like allergy and asthma attacks with shortness of breath, difficulty breathing, wheezing, coughing, and/or chest tightness. Chronic exposure may affect the liver and kidneys.

Sensitization: May cause sensitization by inhalation and skin contact.

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Ethylenediamine	107-15-3	Not listed	A4 Not Classifiable as a Human Carcinogen	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organs: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Ethylenediamine - 107-15-3

Freshwater Algae Data: 645 mg/L EC50 Pseudokirchneriella subcapitata 72 h 151 mg/L EC50 Pseudokirchneriella subcapitata 96 h

Freshwater Fish Species Data: 98.6 - 131.6 mg/L LC50 Pimephales promelas 96 h static 1 191 - 254 mg/L LC50 Pimephales promelas 96 h flow-through 1 115.7 mg/L LC50 Pimephales promelas 96 h semi-static 1 180 - 560 mg/L LC50 Poecilia reticulata 96 h semi-static 1

Water Flea Data: 17 mg/L EC50 Daphnia magna 48 h

Persistence and degradability: No information available

Product code: ET112

Product name: ETHYLENEDIAMINE,
REAGENT

9 / 14

Bioaccumulative potential: Potential for bioconcentration in aquatic organisms is low.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Ethylenediamine	107-15-3	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN1604
Proper Shipping Name: Ethylenediamine
Hazard Class: 8
Subsidiary Class: 3
Packing group: II
Emergency Response Guide Number: 132
Marine Pollutant: No data available
DOT RQ (lbs): No information available
Special Provisions: IB2, T7, TP2
Symbol(s): No information available
Description: UN1604, Ethylenediamine, 8 (3), II

TDG (Canada)

UN-No: UN1604
Proper Shipping Name: Ethylenediamine
Hazard Class: 8
Subsidiary Risk: 3
Packing Group: II
Marine Pollutant: No Information available
Description: UN1604, Ethylenediamine, 8 (3), II

ADR

UN-No: UN1604
Proper Shipping Name: Ethylenediamine
Hazard Class: 8
Packing Group: II
Subsidiary Risk: 3
Description: UN1604, Ethylenediamine, 8 (3), II

IMO / IMDG

UN-No: UN1604
Proper Shipping Name: Ethylenediamine
Hazard Class: 8
Subsidiary Risk: 3

Packing Group: II
Marine Pollutant No information available
EMS: F-E
Description UN1604, Ethylenediamine, 8 (3), II

RID

UN-No: UN1604
Proper Shipping Name: Ethylenediamine
Hazard Class: 8
Subsidiary Risk: 3
Packing Group: II
Description: UN1604, Ethylenediamine, 8 (3), II

ICAO

UN-No: UN1604
Proper Shipping Name: Ethylenediamine
Hazard Class: 8
Subsidiary Risk: 3
Packing Group: II
Description: UN1604, Ethylenediamine, 8 (3), II

IATA

UN-No: UN1604
Proper Shipping Name: Ethylenediamine
Hazard Class: 8
Subsidiary Risk: 3
Packing Group: II
ERG Code: 8F
Special Provisions No information available
Description: UN1604, Ethylenediamine, 8 (3), II

15. REGULATORY INFORMATION

International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Ethylenediamine	107-15-3	Present	Present KE-13141	Present	Present (2)-150	Present	Present	Present 203-468-6

U.S. Regulations

Ethylenediamine

Massachusetts RTK: Present
New Jersey RTK Hazardous Substance List: 0875
New Jersey (EHS) List: 0875 500 lb TPQ
New Jersey - Discharge Prevention - List of Hazardous Substances: Present
New Jersey TCPA - EHS: 20000lbTQ
Pennsylvania RTK: Environmental hazard
Pennsylvania RTK - Environmental Hazard List Present
Minnesota - Hazardous Substance List: Present
New York Release Reporting - List of Hazardous Substances:
 5000 lb RQ
 1 lb RQ
Louisiana Reportable Quantity List for Pollutants: Listed
California Directors List of Hazardous Substances: Present

FDA - Direct Food Additives 21 CFR 173.320
FDA - 21 CFR - Total Food Additives 173.320, 175.105, 175.300, 175.320, 176.180, 178.1010, 178.3120, 181.30

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Ethylenediamine	107-15-3	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Ethylenediamine	107-15-3	5000 lb final RQ 2270 kg final RQ	5000 lb EPCRA RQ	None	None	None

U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Ethylenediamine	107-15-3	Not Applicable	Not Applicable

Canada**WHMIS 2015 - GHS Classifications**

WHMIS 2015 Hazard Classification Information:

Component
Ethylenediamine
107-15-3 (100)

WHMIS 2015 Hazard Classification
Flammable liquids - Category 3: H226 Flammable liquid and vapour.; Acute toxicity - Oral - Category 4: H302 Harmful if swallowed.; Acute toxicity - Dermal - Category 3: H311 Toxic in contact with skin.; Acute toxicity - Inhalation - Category 4: H332 Harmful if inhaled. (available data indicates the LC50 of Ethylenediamine is between 2000 - 4000 ppm/8 hr; this classification was established using an LC50 of 4000 ppm/8 hr); Health Hazard Not Otherwise Classified - Category 1: Causes severe damage to the respiratory tract; Skin corrosion/irritation - Category 1B: H314 Causes severe skin burns and eye damage.; Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage.; Respiratory sensitizers - Category 1: H334 May cause allergic or asthmatic symptoms or breathing difficulties if inhaled.; Skin sensitizers - Category 1: H317 May cause allergic skin reaction.; Specific target organ toxicity - Repeated exposure - Category 2: H373 May cause damage to organs through prolonged or repeated exposure.

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

WHMIS 1988 Hazard Class

Non-controlled

Components
Ethylenediamine

WHMIS 1988
B2,D1B,D2A,D2B,E

Canada Controlled Products Regulation:

Product code: ET112

Product name: ETHYLENEDIAMINE,
REAGENT

12 / 14

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Ethylenediamine	0.1 %

Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Ethylenediamine	107-15-3	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Ethylenediamine	107-15-3	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Ethylenediamine	107-15-3	Not listed

EU Classification

EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Ethylenediamine	107-15-3	Flammable liquids - Flam. Liq. 3: H226 Flammable liquid and vapour.; Acute toxicity - Oral - Acute Tox. 4: H302 Harmful if swallowed. (Minimum classification); Acute toxicity - Dermal - Acute Tox. 4: H312 Harmful in contact with skin. (Minimum classification); Skin corrosion/irritation - Skin Corr. 1B: H314 Causes severe skin burns and eye damage.; Respiratory sensitizers - Resp. Sens. 1: H334 May cause allergic or asthmatic symptoms or breathing difficulties if inhaled.; Skin sensitizers - Skin Sens. 1: H317 May cause allergic skin reaction.612-006-00-6

EU - CLP (1272/2008)

R-phrase(s)

R10 - Flammable.

R34 - Causes burns.

R21/22 - Harmful in contact with skin and if swallowed.

R42/43 - May cause sensitization by inhalation and skin contact.

S-phrase(s)

S23 - Do not breathe gas/fumes/vapor/spray.

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 1/2 - Keep locked up and out of the reach of children.

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Ethylenediamine	107-15-3	R10 Xn; R21/22 C; R34 R42/43	10%≤C C; R34 2%≤C<10% Xi; R36/38	S: (1/2)-23-26-36/37/39-4 5

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

C - Corrosive.

Xi - Irritant.

Xn - Harmful.

Flammable

**16. OTHER INFORMATION**

Preparation Date: 12/26/2017
Revision Date: 12/26/2017
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet