

SAFETY DATA SHEET

SECTION 1 - COMPANY AND PRODUCT IDENTIFICATION

PRODUCT

Product Name: ETHYLENEDIAMINE

Control Number: 00172

Product Description: Ethanol Amine

COMPANY IDENTIFICATION

Supplier: Chemical Distribution Solutions

1125 Oak St. Ste. 303

Conway, AR 72032

24 Hour Emergency Telephone: (800) 424-9300 CHEMTREC

General Information: (501) 978-1111

SECTION 2- HAZARDS IDENTIFICATION

GHS Classification:

[Health]

Acute toxicity, Inhalation Category 4

Acute toxicity, Oral Category 4

Acute toxicity, Dermal Category 3

Skin corrosion Category 1B

Serious eye damage Category 1

Respiratory sensitization Category 1

[Environmental]

Acute Aquatic Toxicity Category 2

Chronic aquatic toxicity Category 3

[Physical]

Flammable liquids Category 3

GHS Label elements, including precautionary statements

Pictograms



Signal Word: Danger

Hazard statement(s)

H226 Flammable liquid and vapor.

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.

Precautionary statement(s)

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/ vapors/ spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

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.

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SECTION 3 · COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS Number	%WT
Ethylenediamine	107-15-3	100

SECTION 4 · FIRST AID MEASURES

FIRST AID PROCEDURES:

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

Skin Contact: Remove contaminated clothing. Wash with soap and water. Get immediate medical attention.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get immediate medical attention.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Get immediate medical attention.

SECTION 5 · FIRE FIGHTING MEASURES

Suitable Extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Hazardous combustion products: Oxides of carbon and nitrogen

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

Unusual Fire and Explosion Hazards: Flammable liquid, soluble or dispersed in water. SMALL FIRE: Use dry chemical powder. LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

SECTION 6 · ACCIDENTAL RELEASE and DISPOSAL MEASURES

Small Spill: Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill: Flammable liquid. Corrosive liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with dry earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV.

SECTION 7 · STORAGE AND HANDLING

Handling: Keep container dry. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately. Avoid contact with skin and eyes

Storage: Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing this material.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls: Provide explosion-proof ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits indicated below.

Exposure Limits: Ethylenediamine 10 ppm ACGIH 15 ppm OSHA

Personal Protective Equipment (PPE):

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133.

Skin: If prolonged or repeated skin contact is likely, wear appropriate protective gloves.

Clothing: Selection of protective clothing depends on work conditions, potential exposure conditions and may include gloves, boots, suits and other protective items.

Respirators: Where adequate ventilation is not available an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of OSHA Respiratory Protection Standard, 29 CFR 1920.134. In confined areas, use a self-contained breathing apparatus.

Other Equipment: Eye wash station and shower in close proximity to use are advised.

SECTION 9- PHYSICAL AND CHEMICAL PROPERTIES

Flash Point: 100 °F

Autoignition Temperature: 671 °F

Boiling Point: 244 °F

Melting Point: 47 °F

Vapor Pressure: 10 mmHg

Vapor Density (Air-1): 2.1

Odor/Appearance: Clear liquid with slight ammonia odor

Flammability Limits: Lower: 3 Upper: 16

Specific Gravity: 0.899

Volatile %: No available data

Evaporation Rate (Water=1): No available data

pH: 12.2 at 110 g/l

Solubility in Water: soluble

SECTION 10 - STABILITY AND REACTIVITY

Chemical Stability: Absorbs carbon dioxide (CO₂) from air. Stable under use and storage conditions.

Conditions to Avoid: Air Exposure to moisture. Heat, flames and sparks.

Incompatible materials: Oxidizing agents, Phosphorus halides, Aldehydes, Organic halides

Hazardous Polymerization: Will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

Signs and Symptoms of Overexposure:

Skin: Skin inflammation is characterized by itching, scaling, reddening, or, occasionally blistering.

Eyes: Inflammation of the eye is characterized by redness, watering, and itching.

Inhalation: Causes irritation of the mouth, throat and esophagus.

Ingestion: Causes irritation and possible burns of the mouth, throat and esophagus.

Acute oral toxicity:

LD50 rat: 1,200 mg/kg

Acute inhalation toxicity:

LC50 rat: 14.7 mg/l 4h

Acute dermal toxicity

LD50 rabbit: 560 mg/kg

SECTION 12 - ECOLOGICAL INFORMATION

Aquatic Toxicity: Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 115.7 mg/l - 96 h

Bio-accumulative potential: Readily biodegradable.

Mobility: No Available Data

SECTION 13 - DISPOSAL CONSIDERATIONS

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

SECTION 14 - TRANSPORTATION

U.S. DEPARTMENT OF TRANSPORTATION (Road or Rail):

Proper Shipping Name: Ethylenediamine

Hazard Class: 8 (3)

UN Number: 1604

Packaging Group: 2

SECTION 15 - REGULATORY INFORMATION

US FEDERAL REGULATIONS

Comprehensive Environmental Response and Liability Act (CERCLA)

This material is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

SARA 302: This material contains Ethylenediamine which is subject to the reporting requirements of SARA Title III, Section 302. The reportable quantity (RQ) for this material is 5,000 pounds. If appropriate, immediately report to the National Response Center (800/424-8802) as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies.

Toxic Substance Control Act (TSCA): All components of this product are listed on the TSCA inventory list.

SARA Section 311/312 (40 CFR 370) Hazard Categories:

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

SARA Section 313 (40 CFR 372) Hazard Categories: 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.

Clean Water Act: Ethylenediamine in this product is listed as Hazardous Substances under the CWA

Clean Air Act: None of the chemicals in this product are listed as Hazardous Substances under the CAA.

California Prop 65: This product contains no chemicals known by the State of California to cause cancer, birth defects or other reproductive harm.

SECTION 16 · OTHER INFORMATION

MSDS Revision Date: November 2014

National Fire Protection Association (NFPA) Ratings: This information is intended solely for the use of individuals trained in the NFPA system.

Health: 3

Flammability: 2

Reactivity: 0

The data in this Safety Data Sheet relates to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as warranty or representation for which Chemical Distribution Solutions assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.