

FLINN SCIENTIFIC, INC.
Material Safety Data Sheet (MSDS)

MSDS #: 327.00

Revision Date: July 29, 2011

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**Ethylenediamine**

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CHEMTREC Emergency Phone Number: (800) 424-9300

SECTION 2 — COMPOSITION, INFORMATION ON INGREDIENTS

Ethylenediamine

Synonym: 1,2-Diaminoethane, 1,2-Ethanediamine

CAS#: 107-15-3

SECTION 3 — HAZARDS IDENTIFICATION

Clear, colorless liquid. Ammonia-like odor. Strong base.

Moderately toxic by ingestion, inhalation, and skin absorption; severe irritant to skin and eyes.

Substance is caustic and corrosive. Avoid all body tissue contact.

Flammable liquid.

FLINN AT-A-GLANCE

Health-3

Flammability-3

Reactivity-2

Exposure-3

Storage-3

0 is low hazard, 3 is high hazard

SECTION 4 — FIRST AID MEASURES

Call a physician and seek medical attention for further treatment, observation, and support after first aid.

Inhalation: Remove to fresh air at once. If breathing has stopped, give artificial respiration immediately.

Eye or External: Immediately flush with fresh water for at least 15 minutes.

Internal: Rinse mouth. Give large quantities of water for dilution. Call a physician or poison control at once.

SECTION 5 — FIRE FIGHTING MEASURES

Class 1C flammable liquid.

Flash point: 34 °C Upper: 16% Lower: 2.7% Autoignition Temperature: 379 °C

When heated to decomposition, emits toxic fumes of NH₃ and NO_x.**Fire Fighting Instructions:** Use a triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive pressure mode.**NFPA CODE**

H-3

F-2

R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from the area. Remove all ignition sources and ventilate area. Contain the spill with sand or other inert absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines, and amides.

Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in Flinn Saf-Stor can.

Absorbs carbon dioxide from air, keep container tightly closed and store in a Flinn Chem-Saf bag.

Use and dispense in a hood.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and a chemical-resistant apron. Use ventilation to keep airborne concentrations below exposure limits. Always wear a NIOSH-approved respirator with proper cartridges or a positive pressure, air-supplied respirator when handling this material in emergency situations (spill or fire).

Exposure guidelines: PEL 10 ppm (OSHA)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless liquid with an ammonia odor. Strong base.
Solubility: soluble in water and alcohol.
Formula: $\text{H}_2\text{NCH}_2\text{CH}_2\text{NH}_2$
Formula weight: 60.10

Boiling point: 117 °C
Melting point: 11 °C
Refractive index: 1.4565
Specific gravity: 0.8979

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with acids, acid chlorides, oxidizers, acid anhydrides, phosphorus halides, heat, open flame, or any source of ignition.
Shelf life: Poor, absorbs carbon dioxide from air, keep container tightly closed and store in a Flinn Chem-Saf bag.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Toxic, corrosive, lachrymator, sensitizer, stomach pains, vomiting, diarrhea.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD₅₀: 1200 mg/kg
IHL-RAT LC₅₀: 300 mg/m³
SKN-RBT LD₅₀: 730 mg/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply, before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Ethylenediamine
Hazard class: 8, Corrosive, flammable liquid.
UN number: UN1604
N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (203-468-6), RCRA code D001.

SECTION 16 — OTHER INFORMATION

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**Consult your copy of the *Flinn Science Catalog/Reference Manual*
for additional information about laboratory chemicals.**