



PURITAN PRODUCTS

Effective Date: 01/01/13
Replaces Revision: 08/18/08

NON-EMERGENCY TELEPHONE
610-866-4225

24-HOUR CHEMTREC EMERGENCY TELEPHONE
800-424-9300

SDS – SAFETY DATA SHEET

1. Identification

Product Identifier: 2 – AMINOETHANOL

Synonyms: Monoethanolamine, Ethanolamine, Beta-Aminoethanol, Ethylolamine, Glycinol

Chemical Formula: NH₂CH₂CH₂OH

Recommended Use of the Chemical and Restrictions On Use: Laboratory Reagent

Manufacturer / Supplier: Puritan Products; 2290 Avenue A, Bethlehem, PA 18017 **Phone:** 610-866-4225

Emergency Phone Number: 24-Hour Chemtrec Emergency Telephone 800-424-9300

2. Hazard(s) Identification

Classification of the Substance or Mixture:

Flammable liquids (Category 4)
Acute toxicity, Oral (Category 4)
Acute toxicity, Inhalation (Category 4)
Acute toxicity, Dermal (Category 4)
Skin corrosion (Category 1B)
Serious eye damage (Category 1)
Acute aquatic toxicity (Category 3)

Risk Phrases:

R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.
R34: Causes burns.

Label Elements:

Trade Name: 2 - AMINOETHANOL

Signal Word: Danger



Hazard Statements:

H227: Combustible liquid.
H302 + H312 + H332: Harmful if swallowed, in contact with skin or if inhaled.
H314: Causes severe skin burns and eye damage.
H402: Harmful to aquatic life.

Precautionary Statements:

P280: Wear protective gloves / protective clothing / eye protection / face protection.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTER or doctor / physician.

3. Composition / Information on Ingredients

CAS Number: 141-43-5

EC Number: 205-483-3

Index Number: 603-030-00-8

Molecular Weight: 61.08 g/mol

Ingredient	CAS Number	EC Number	Percent	Hazardous	Chemical Characterization
Ethanolamine	141-43-5	205-483-3	99 - 100%	Yes	Substance

4. First-aid Measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give Oxygen. Call a physician.

Ingestion: DO NOT INDUCE VOMITING unless directed by a physician! Rinse mouth with water. Never give anything by mouth to an unconscious person. Call a physician.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Call a physician.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire-fighting Measures

Fire: Combustible! Flash point: 85C (185F) CC / Autoignition temperature: 410C (770F)
Flammable limits in air % by volume: lel: 5.5; uel: 17

Explosion: Above flash point, vapor-air mixtures are explosive within flammable limits noted above.

Fire Extinguishing Media: Water spray, dry chemical, alcohol foam, or carbon dioxide. Water spray may be used to keep fire exposed containers cool. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Environmental Precautions and Methods and Materials for Containment and Cleaning Up: Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth,) and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

7. Handling and Storage

Precautions for Safe Handling and Conditions for Safe Storage, Including Any Incompatibilities: Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from any source of heat or ignition. Isolate from oxidizing materials. Avoid contact with copper and copper alloys. Material is suitably handled in stainless steel equipment. Do not use aluminum for storage of aqueous solutions. Outside or detached storage is preferred. Isolate from acidic materials. Monoethanolamine is generally stored in plain steel equipment. Product may solidify at room temperature. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid.) Observe all warnings and precautions listed for the product.

8. Exposure Controls / Personal Protection

Airborne Exposure Limits:

OSHA Permissible Exposure Limit (PEL): 3 ppm (TWA) 6 ppm (STEL)

ACGIH Threshold Limit Value (TLV): 3 ppm (TWA) 6 ppm (STEL)

Ventilation System: A system of local and / or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved): If the exposure limit is exceeded and engineering controls are not feasible, a full face piece respirator with organic vapor cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full face piece positive-pressure, air-supplied respirator. **WARNING:** Air purifying respirators do not protect workers in Oxygen-deficient atmospheres.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and / or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance: Clear, colorless liquid

Odor: Ammonia odor

Odor Threshold: Not determined

pH: 12.1 (25% solution)

% Volatiles by volume @ 21C (70F): No information found

Melting Point: 10C (50F)

Boiling Point / Boiling Range: 170C (338F)

Flash Point: 86 C (187 F)

Evaporation Rate (BuAC=1): < 1

Flammability: Combustible

Upper / Lower Flammability or Explosive Limits: Upper – 17 / Lower – 5.5

Vapor Pressure (mm Hg): 0.4 @ 20C (68F)

Vapor Density (Air=1): 2.10

Relative Density: 1.02

Solubility: Miscible in water

Partition Coefficient: n-octanol / water: No information found

Auto-ignition Temperature: 410C (770F)

Decomposition Temperature: No information found

Viscosity: No information found

10. Stability and Reactivity

Reactivity and / or Chemical Stability: Stable under ordinary conditions of use and storage. Hygroscopic. Absorbs carbon dioxide. A strong base.

Possibility of Hazardous Reactions and Conditions to Avoid: Heat, flames, ignition sources and incompatibles.

Incompatible Materials: Sulfuric Acid, Hydrochloric Acid, Acetic Acid, Carbon Dioxide in the air, Copper, Copper alloys, galvanized Iron, Aluminum, Acetic Anhydride, Acrolein, Acrylic Acid, Acrylonitrile, Chlorosulfonic Acid, Epichlorohydrin, Hydrofluoric Acid, Mesityl Oxide, Nitric Acid, Oleum, Beta-propiolactone, and Vinyl Acetate.

Hazardous Decomposition Products: Burning may produce Carbon Monoxide, Carbon Dioxide, Nitrogen Oxides.

11. Toxicological Information

Emergency Overview: DANGER! CAUSES BURNS. COMBUSTIBLE. HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. AFFECTS CENTRAL NERVOUS SYSTEM.

Potential Health Effects:

Inhalation: Vapor may cause irritation to the respiratory tract. Symptoms may include sore throat, coughing, respiratory distress, headache, lethargy, and narcosis. Exposure to higher concentrations may cause pulmonary irritation, and kidney and liver damage.

Ingestion: May cause mucosal burns of the mouth and esophagus, abdominal pain, nausea, and vomiting. May cause systemic poisoning with symptoms paralleling inhalation.

Skin Contact: May cause irritation, redness, burns, and pain. May be absorbed through the skin; symptoms may parallel inhalation.

Eye Contact: Vapors and contact may cause severe irritation, burns, redness, pain, and blurred vision.

Chronic Exposure: Prolonged or repeated skin exposure may cause severe irritation or dermatitis.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or impaired liver, kidney, and pulmonary function may be more susceptible to the effects of this material.

Specific Target Organ Toxicity - Single Exposure (Globally Harmonized System:) No data available.

Specific Target Organ Toxicity - Repeated Exposure (Globally Harmonized System:) No data available.

Numerical Measures of Toxicity: Cancer Lists: NTP Carcinogen

Ingredient	Known	Anticipated	IARC Category
Ethanolamine (141-43-5)	No	No	None

Acute Toxicity:

Oral rat LD50: 1720 mg/kg

Inhalation mouse LC50: 2420 mg/m³ / 2 h

Skin rabbit LD50: 1000 mg/kg Irritation data: Skin rabbit - 505 mg moderate; Eye rabbit - 0.250 mg severe

Investigated as a mutagen and reproductive effector.

12. Ecological Information

Ecotoxicity:

Toxicity to fish LC50: Pimephales promelas (fathead minnow) - 227 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates EC50: Daphnia magna (Water flea) - 65 mg/l - 48 h

Toxicity to algae EC50: Desmodesmus subspicatus (green algae) - 15 mg/l - 72 h

Persistence and Degradability: When released into the soil, this material may biodegrade to a moderate extent. When released into water, this material may biodegrade to a moderate extent. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals.

Bioaccumulative Potential:

This material has an estimated bioconcentration factor (BCF) of less than 100. This material is not expected to significantly bioaccumulate.

Mobility in Soil: When released into the soil, this material is expected to leach into groundwater.

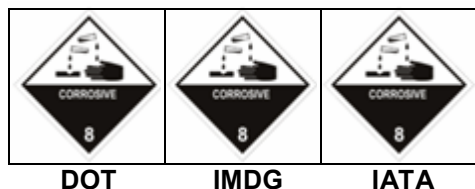
Other adverse effects: When released into the air, this material is expected to have a half-life of less than 1 day. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

UN Number: UN2491
UN Proper Shipping Name: ETHANOLAMINE
Packing Group: III



Land Transport ADR/RID and GGVS/GGVE (Cross Border / Domestic)

Transport Hazard Class(es): 8

Maritime Transport IMDG/GGVSea

Transport Hazard Class(es): 8

Marine Pollutant: No

Air Transport ICAO-TI and IATA-DGR

Transport Hazard Class(es): 8

Transport in Bulk according to Annex II of MARPOL 73/78 and the IBC Code

Special Precautions for User: No additional information

15. Regulatory Information

Chemical Inventory Status – Part 1

Ingredient	TSCA	EC	Japan	Australia
Ethanolamine (141-43-5)	Yes	Yes	Yes	Yes

Chemical Inventory Status – Part 2

Ingredient	Korea	Canada		Phil.
		DSL	NDSL	
Ethanolamine (141-43-5)	Yes	Yes	No	Yes

Federal, State & International Regulations - Part 1

Ingredient	SARA 302		SARA 313	
	RQ	TPQ	List Chemical	Catg.
Ethanolamine (141-43-5)	No	No	No	No

Federal, State & International Regulations - Part 2

Ingredient	RCRA		TSCA
	CERCLA	261.33	8(d)
Ethanolamine (141-43-5)	No	No	No

Chemical Weapons Convention: No	TSCA 12(b): No		CDTA: No
SARA 311/312: Acute: Yes	Chronic: No	Fire: Yes	Pressure: No
Reactivity: No	Pure / Liquid		

Australian Hazchem Code: 2R

Poison Schedule: None allocated

16. Other Information

THE INFORMATION CONTAINED IN THIS DATA SHEET IS BASED ON THE DATA AVAILABLE TO PURITAN PRODUCTS AT THIS TIME. WHILE BELIEVED TO BE ACCURATE, PURITAN PRODUCTS DOES NOT CLAIM IT TO BE ALL INCLUSIVE. IT IS PROVIDED INDEPENDENT OF ANY SALE OF THE PRODUCT, FOR THE PURPOSE OF HAZARD COMMUNICATION, AND AS A GUIDE FOR THE APPROPRIATE PRECAUTIONARY HANDLING OF THE PRODUCT BY PROPERLY TRAINED INDIVIDUALS. IT IS NOT INTENDED TO PROVIDE PRODUCT PERFORMANCE OR APPLICABILITY INFORMATION, AND NO EXPRESS OR IMPLIED WARRANTY OF ANY KIND IS MADE WITH RESPECT TO THE PRODUCT, THE UNDERLYING PRODUCT DATA, OR THE INFORMATION CONTAINED HEREIN.

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