

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

| | |
|--------------|----------------------------------|
| Product name | Ethanolamine |
| CAS number | 141-43-5 |
| Synonyms | 2-Aminoethanol; monoethanolamine |

1.2 Relevant identified uses of the substance or mixture and uses advised against

| | |
|-----------------|-----------------------|
| Identified uses | Laboratory chemicals. |
|-----------------|-----------------------|

1.3 Details of the supplier of the safety data sheet

| | |
|-----------|--|
| Company | Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A. |
| Telephone | 512-668-9918 |
| Fax | 512-886-4008 |

1.4 Emergency telephone

| | | |
|-------------------|------------------------------|----------|
| Emergency Phone # | US & Canada: 1-800-535-5053 | INFOTRAC |
| | International 1-352-323-3500 | INFOTRAC |


SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

| | |
|-----------------------------------|-------------|
| Flammable Liquids | Category 4 |
| Acute Oral Toxicity | Category 4 |
| Acute Dermal Toxicity | Category 4 |
| Acute Inhalation Toxicity | Category 4 |
| Skin Corrosion/Irritation | Category 1B |
| Serious Eye Damage/Eye Irritation | Category 1 |

2.2 GHS Label elements, including precautionary statements

| | |
|--------------------------|---|
| Pictogram |  |
| Signal Word | Danger |
| Hazard statements | Combustible liquid. Causes severe skin burns and eye damage. May cause respiratory irritation. Harmful if swallowed, in contact with skin or if inhaled. |
| Precautionary statements | <p>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. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep cool.</p> <p>Response: Immediately call a POISON CENTER or doctor/physician.</p> <p>IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.</p> <p>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>Fire: In case of fire, use CO₂, dry chemical, or foam for extinction.</p> <p>Storage: Store locked up. Store in a well-ventilated place. Keep container tightly closed.</p> <p>Disposal: Dispose of contents/container to an approved waste disposal plant.</p> |

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Harmful to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

3.1 Components

| Chemical name | Common name and synonyms | CAS number | Concentration |
|---------------|----------------------------------|------------|---------------|
| Ethanolamine | 2-Aminoethanol; monoethanolamine | 141-43-5 | >95% |

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Remove from exposure, lie down. Call a physician immediately. If not breathing, give artificial respiration.

In case of skin contact Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Call a physician immediately.

In case of eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing.

If swallowed Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Clean mouth with water. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Difficulty in breathing. Causes burns by all exposure routes. Symptoms of overexposure may be headache, dizziness, tiredness, nausea, and vomiting. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue, and danger of perforation.

4.3 Indication of any immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media CO₂, dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers.

Unsuitable extinguishing media

No information available.

5.2 Specific hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin, and mucous membranes. Combustible material. Containers may explode when heated.

Hazardous Combustion Products: Carbon monoxide (CO). Carbon dioxide (CO₂). Nitrogen oxides (NO_x).

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

5.4 Further information

Flash Point 86 °C / 186.8 °F

Autoignition Temperature 410 °C / 770 °F

Explosion limits

Upper 23.50%

Lower 3.00%

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

| Health | Flammability | Instability | Physical hazards |
|--------|--------------|-------------|------------------|
| 3 | 2 | 1 | N/A |

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.

6.2 Environmental precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information. Avoid release to the environment. Collect spillage.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition.

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed, seek immediate medical assistance. Do not breathe mist/vapors/spray. Keep away from open flames, hot surfaces, and sources of ignition.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep containers tightly closed in a dry, cool, and well-ventilated place. Corrosives area. Keep away from heat, sparks, and flame. Store under an inert atmosphere.

Incompatibilities

Strong oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Component | Type | Value | |
|--------------|----------------|---------------------|----------------------|
| Ethanolamine | (Vacated) TWA | 3 ppm | 8 mg/m ³ |
| | (Vacated) STEL | 6 ppm | 15 mg/m ³ |
| | TWA | 3 ppm | |
| | TWA | 6 mg/m ³ | |

US. ACGIH Threshold Limit Values

| Component | Type | Value |
|--------------|------|-------|
| Ethanolamine | TWA | 3 ppm |
| | STEL | 6 ppm |

US. NIOSH: Pocket Guide to Chemical Hazards

| Component | Type | Value | |
|--------------|------|--------|----------------------|
| Ethanolamine | IDLH | 30 ppm | |
| | TWA | 3 ppm | 8 mg/m ³ |
| | STEL | 6 ppm | 15 mg/m ³ |

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting equipment. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Tight sealing safety goggles. Face protection shield.

Skin protection

Wear impervious gloves and/or clothing if needed to prevent contact with the material.

Body Protection

Wear impervious gloves and/or clothing if needed to prevent contact with the material.

Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Control of environmental exposure

No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|---------------------|--------------------------|
| Physical State | Liquid |
| Appearance | Colorless, viscous |
| Odor | Unpleasant |
| Odor Threshold | No information available |
| pH | 10 |
| Melting Point/Range | 10.3 °C / 50.5 °F |
| Boiling Point/Range | 170.8 °C / 339.4 °F |
| Evaporation Rate | No information available |

| | |
|---|--------------------------|
| Flammability (solid) | Not applicable |
| Flammability or explosive limit | |
| Upper | 23.50% |
| Lower | 3.00% |
| Vapor Pressure | 0.1 |
| Vapor Density | 2.1 |
| Density | 1.018 |
| Solubility | Soluble in water |
| Partition coefficient; n-octanol/water | -1.31 |
| Autoignition Temp | 410 °C / 770 °F |
| Decomposition Temp | No information available |
| Viscosity | No information available |
| Molecular Formula | C2 H7 N O |
| Molecular Weight | 61.08 g/mol |
| VOC Content(%) | No information available |
| Oxidizing properties | No information available |

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

Hygroscopic. Air sensitive.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Incompatible products. Excess heat. Keep away from open flames, hot surfaces, and sources of ignition. Exposure to air. Exposure to moist air or water.

10.5 Incompatible materials

Strong oxidizing agents.

10.6 Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NO_x).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--------------|------------------|---------------------|---------------------|
| Ethanolamine | 1720 mg/kg (Rat) | 1000 mg/kg (Rabbit) | > 1.3 mg/L (Rat) 6h |

Skin corrosion/irritation

Causes burns by all exposure routes.

Serious eye damage/eye irritation

Causes burns by all exposure routes.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

| Component | CAS | IARC | NTP | ACGIH | OSHA | Mexico |
|--------------|----------|------------|------------|------------|------------|------------|
| Ethanolamine | 141-43-5 | Not listed | Not listed | Not listed | Not listed | Not listed |

Specific target organ toxicity - single exposure

Respiratory system.

Specific target organ toxicity - repeated exposure

None known.

Reproductive toxicity

No information available.

Chronic effects

Symptoms of overexposure may be headache, dizziness, tiredness, nausea, and vomiting. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue, and danger of perforation.

11.2 Additional Information

The toxicological properties have not been fully investigated.

SECTION 12: Ecological information

12.1 Toxicity

Do not empty into drains. Harmful to aquatic organisms; may cause long-term adverse effects in the aquatic environment.

| Product | | Species | Test Results |
|---------|------|------------------|--------------|
| | EC50 | Freshwater Algae | 15 mg/L/72h |

| | | | |
|--------------|------|----------------------------|------------------|
| Ethanolamine | LC50 | Leusiscus idus | >200 mg/L/48h |
| | LC50 | Salmo gairdner | 150 mg/L/96h |
| | EC50 | Pseudomonas putida | 110 mg/L/17h |
| | EC50 | Nitrosomonas | 12200 mg/L/2h |
| | EC50 | Photobacterium phosphoreum | 13.7 mg/L/30 min |
| | EC50 | Water Flea | 65 mg/L/48h |

12.2 Persistence and degradability

Soluble in water. Persistence is unlikely based on information available.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

Will likely be mobile in the environment due to its water solubility.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

| | |
|----------------------|--------------|
| UN-No | UN2491 |
| Proper Shipping Name | ETHANOLAMINE |
| Hazard Class | 8 |
| Packing Group | III |

IMDG

| | |
|----------------------|--------------|
| UN-No | UN2491 |
| Proper Shipping Name | ETHANOLAMINE |
| Hazard Class | 8 |
| Packing Group | III |

IATA

| | |
|----------------------|--------------|
| UN-No | UN2491 |
| Proper Shipping Name | ETHANOLAMINE |
| Hazard Class | 8 |
| Packing Group | III |

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Not listed.

SARA 311/312 Hazardous

See Section 2 for more information.

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations

US. Massachusetts RTK - Substance List

Listed, Ethanolamine (CAS #141-43-5).

US. New Jersey Worker and Community Right-to-Know Act

Listed, Ethanolamine (CAS #141-43-5).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed, Ethanolamine (CAS #141-43-5).

California Proposition 65

Not listed.

SECTION 16: Other information

Issue date: 04/08/2022

Revision 1: 02/20/2025

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.