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
Specific Target Organ Toxicity (single exposure)	Category 3

Target Organ(s) - Respiratory system

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:

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.

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

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

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

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Fire: In case of fire, use CO2, dry chemical, or foam for extinction.

Storage: Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal: Dispose of contents/container to an approved waste disposal plant.

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 CO_2, 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 (NOx).

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/m3
	(Vacated) STEL	6 ppm 15 mg/m3
	TWA	3 ppm
	TWA	6 mg/m3

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/m3
	STEL	6 ppm 15 mg/m3

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 (NOx).

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
Ethanolamine	EC50	Freshwater Algae	15 mg/L/72h
	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
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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.