SAFETY DATA SHEET

Ethylaminoethanol

3382578

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SECTION 1. IDENTIFICATION

Product name : Ethylaminoethanol

Product code : P5120614

Manufacturer or supplier's details

Company name of supplier : Taminco US LLC
A Subsidiary of Eastman Chemical Company

Address : 200 South Wilcox Drive
Kingsport TN 37660

Telephone : (423) 229-2000

Emergency telephone : CHEMTREC: +1-800-424-9300, +1-703-527-3887 CCN7321

Recommended use of the chemical and restrictions on use

Recommended use : Chemical intermediate

Restrictions on use : None known.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Flammable liquids : Category 4

Acute toxicity (Oral) : Category 4

Skin corrosion : Category 1B

Serious eye damage : Category 1

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H227 Combustible liquid.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

Precautionary Statements : **Prevention:**
P210 Keep away from heat/sparks/open flames/hot surfaces.

No smoking.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Pure substance

CAS-No. : Not Assigned

Ingredients

Chemical name	CAS-No.	Concentration (% w/w)
2-(ethylamino)ethanol	110-73-6	> 99

SECTION 4. FIRST AID MEASURES

If inhaled : Move to fresh air.
If breathing is irregular or stopped, administer artificial respiration.
Call a physician or poison control center immediately.

In case of skin contact	:	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before re-use. Thoroughly clean shoes before reuse.
In case of eye contact	:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If easy to do, remove contact lens, if worn. Call a physician or poison control center immediately.
If swallowed	:	Call a physician or poison control center immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	:	Irritating to eyes, respiratory system and skin. None known. Harmful if swallowed. Causes serious eye damage. Causes severe burns.
Notes to physician	:	Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray Carbon dioxide (CO2) Dry chemical Foam
Unsuitable extinguishing media	:	None known.
Specific hazards during fire fighting	:	None known.
Hazardous combustion products	:	No hazardous combustion products are known
Further information	:	Combustible liquid and vapor.
Special protective equipment for fire-fighters	:	Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Local authorities should be advised if significant spillages cannot be contained.
Environmental precautions	:	Avoid release to the environment.

Methods and materials for containment and cleaning up	:	Eliminate all ignition sources if safe to do so. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13). Large spills should be collected mechanically (remove by pumping) for disposal. Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion	:	None known.
Advice on safe handling	:	Do not breathe vapors or spray mist. Do not get on skin or clothing. Do not get in eyes. Do not taste or swallow. Ensure adequate ventilation. Wash thoroughly after handling.
Conditions for safe storage	:	Keep container tightly closed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	:	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal protective equipment

Respiratory protection	:	Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.
Hand protection		
Remarks	:	Wear suitable gloves.
Eye protection	:	Safety glasses with side-shields Safety goggles
Protective measures	:	Ensure that eye flushing systems and safety showers are located close to the working place.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	colorless
Odor	:	ammoniacal
Odor Threshold	:	not determined
pH	:	alkaline
Melting point/freezing point	:	18 °F / -8 °C
Boiling point/boiling range	:	337.1 °F / 169.5 °C
Flash point	:	171 °F / 77 °C Method: Pensky-Martens closed cup
Evaporation rate	:	not determined
Self-ignition	:	635 °F / 335 °C
Upper explosion limit / Upper flammability limit	:	not determined
Lower explosion limit / Lower flammability limit	:	not determined
Vapor pressure	:	0.46 hPa (68 °F / 20 °C)
Relative vapor density	:	3 (Air = 1.0)
Relative density	:	0.914
Partition coefficient: n-octanol/water	:	log Pow: -0.66
Autoignition temperature	:	671 °F / 355 °C
Decomposition temperature	:	not determined
Viscosity		
Viscosity, dynamic	:	not determined
Viscosity, kinematic	:	not determined

Explosive properties	:	No data available
Oxidizing properties	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	None reasonably foreseeable.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Hazardous decomposition products formed under fire conditions.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Strong acids and oxidizing agents
Hazardous decomposition products	:	Carbon dioxide (CO2) Carbon monoxide Nitrogen oxides (NOx)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed.

Ingredients:

2-(ethylamino)ethanol:

Acute oral toxicity	:	LD50 Oral (Rat): 1,073 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 2.17 mg/l Exposure time: 4 h Assessment: The substance or mixture has no acute inhalation toxicity Remarks: An LC50/inhalation/4h/rat could not be determined because no mortality of rats was observed at the maximum achievable concentration.
Acute dermal toxicity	:	LD50 Dermal (Rat): 3,670 mg/kg

Skin corrosion/irritation

Causes severe burns.

Ingredients:

2-(ethylamino)ethanol:

Result	:	Corrosive after 3 minutes to 1 hour of exposure

Serious eye damage/eye irritation

Causes serious eye damage.

Ingredients:

2-(ethylamino)ethanol:

Result : Corrosive

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Product:

No data available

Information on likely routes of exposure

Product:

Inhalation : Remarks: None known.

Skin contact : Remarks: Causes skin burns.
May be harmful in contact with skin.

Eye contact : Remarks: Causes serious eye damage.

Ingestion : Remarks: Harmful if swallowed.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

2-(ethylamino)ethanol:

Toxicity to fish	:	LC50 (Leuciscus idus (Golden orfe)): 147 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia): 35 mg/l Exposure time: 48 h

Persistence and degradability

Ingredients:

2-(ethylamino)ethanol:

Biodegradability	:	Result: Readily biodegradable.

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Dispose of in accordance with local regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No.	:	UN 2735
Proper shipping name	:	Amines, liquid, corrosive, n.o.s. (Ethylaminoethanol)
Class	:	8

Packing group	:	II
Labels	:	Corrosive
Packing instruction (cargo aircraft)	:	855
Packing instruction (passenger aircraft)	:	851

IMDG-Code

UN number	:	UN 2735
Proper shipping name	:	AMINES, LIQUID, CORROSIVE, N.O.S. (Ethylaminoethanol)
Class	:	8
Packing group	:	II
Labels	:	8
EmS Code	:	F-A, S-B
Marine pollutant	:	no

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

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number	:	UN 2735
Proper shipping name	:	Amines, liquid, corrosive, n.o.s. (Ethylaminoethanol)
Class	:	8
Packing group	:	II
Labels	:	Class 8 - Corrosive
ERG Code	:	153
Marine pollutant	:	no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

Ingredients	CAS-No.	Component TPQ (lbs)

SARA 311/312 Hazards	:	Fire Hazard Acute Health Hazard
SARA 313	:	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 Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

The ingredients of this product are reported in the following inventories:

TSCA	:	On TSCA Inventory
DSL	:	All components of this product are on the Canadian DSL
AICS	:	On the inventory, or in compliance with the inventory
ENCS	:	On the inventory, or in compliance with the inventory
ISHL	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory

TSCA list

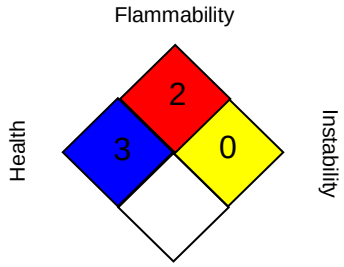
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

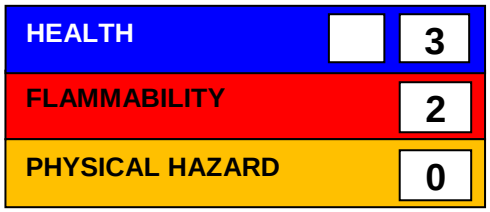
SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance

Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 08/07/2018

The information provided in this Material 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

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