

MATERIAL SAFETY DATA SHEET

Monoethanolamine

Section 1 - Chemical Product and Company Identification

MSDS Name:	Ethanolamine
Synonyms:	2-Aminoethanol
Company Identification: (INDIA)	Veritas House, 70 Mint Road, Fort, Mumbai - 400 001. INDIA
For information in the INDIA, call:	Tel: +91 - 22 - 2275 5555 / 6184 0000, Fax: +91 - 22 - 2275 5556 / 6184 0001

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
141-43-5	Ethanolamine	99%	205-483-3

Hazard Symbols:	C
	
Risk Phrases:	20/21/22 34

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Harmful by inhalation, in contact with skin and if swallowed. Causes burns.

Potential Health Effects

Eye:	Causes eye burns.
Skin:	Harmful if absorbed through the skin. Causes skin burns.
Ingestion:	Harmful if swallowed. Causes gastrointestinal tract burns.
Inhalation:	Harmful if inhaled. Causes chemical burns to the respiratory tract.
Chronic:	

Section 4 - First Aid Measures

Eyes:	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin:	Get medical aid immediately. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion:	Get medical aid immediately. Wash mouth out with water.
Inhalation:	Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Notes to Physician:	

Section 5 - Fire Fighting Measures

General Information:	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Will burn if involved in a fire. Combustible liquid.
Extinguishing Media:	In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

Section 6 - Accidental Release Measures

General Information:	Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks:	Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

Section 7 - Handling and Storage

Handling:	Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes.
Storage:	Store in a cool, dry place. Store in a tightly closed container. Store under nitrogen.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

CAS# 141-43-5:

United Kingdom, WEL - TWA: 3 ppm TWA; 7.6 mg/m³ TWA United Kingdom, WEL - STEL: 6 ppm STEL; 15 mg/m³ STEL

United States OSHA: 3 ppm TWA; 6 mg/m³ TWA

Belgium - TWA: 3 ppm VLE; 7.6 mg/m³ VLE Belgium - STEL: 6 ppm VLE; 15 mg/m³ VLE

France - VME: 3 ppm VME; 8 mg/m³ VME

Germany: 2 ppm TWA; 5.1 mg/m³ TWA Germany: skin notation

Japan: 3 ppm OEL; 7.5 mg/m³ OEL

Malaysia: 3 ppm TWA; 7.5 mg/m³ TWA

Netherlands: 3 ppm STEL; 7.6 mg/m³ STEL Netherlands: 1 ppm MAC; 2.5 mg/m³ MAC

Spain: 3 ppm VLA-ED; 7.5 mg/m³ VLA-ED Spain: 6 ppm VLA-EC; 15 mg/m³ VLA-EC

Personal Protective Equipment

Eyes:	Wear chemical splash goggles.
Skin:	Wear appropriate protective gloves to prevent skin exposure.
Clothing:	Wear appropriate protective clothing to prevent skin exposure.
Respirators:	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.

Section 9 - Physical and Chemical Properties

Physical State:	Clear liquid
Color:	APHA: 15 max
Odor:	ammonia-like
pH:	Not available
Vapor Pressure:	0.48mmHg @20 deg C
Viscosity:	24 cP @20 deg C
Boiling Point:	175 deg C @760mmHg (338.00°F)
Freezing/Melting Point:	10.3 deg C (50.54°F)
Autoignition Temperature:	450 deg C (842.00 deg F)
Flash Point:	85 deg C (185.00 deg F)
Explosion Limits: Lower:	5.5 Vol %
Explosion Limits: Upper:	17 Vol %
Decomposition Temperature:	Not available
Solubility in water:	Miscible
Specific Gravity/Density:	1.012
Molecular Formula:	C2H7NO
Molecular Weight:	61.08

Section 10 - Stability and Reactivity

Chemical Stability:	Stable under normal temperatures and pressures. Air sensitive. Hygroscopic: absorbs moisture or water from the air.
Conditions to Avoid:	Incompatible materials, light, exposure to air, exposure to moist air or water.
Incompatibilities with Other Materials	Oxidizing agents, acids, acid chlorides, aluminum, anhydrides, copper, galvanized iron.
Hazardous Decomposition Products	Nitrogen oxides, carbon monoxide, carbon dioxide.
Hazardous Polymerization	Has not been reported.

Section 11 - Toxicological Information

RTECS#:	CAS# 141-43-5: KJ5775000
LD50/LC50:	RTECS: CAS# 141-43-5: Draize test, rabbit, eye: 250 ug Severe; Oral, mouse: LD50 = 700 mg/kg; Oral, rabbit: LD50 = 1 gm/kg; Oral, rat: LD50 = 1720 mg/kg; Skin, rabbit: LD50 = 1 mL/kg;
Carcinogenicity:	Ethanolamine - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other:	See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity:	Not available
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Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

	IATA	IMO	RID/ADR
Shipping Name:	ETHANOLAMINE	ETHANOLAMINE	ETHANOLAMINE
Hazard Class:	8	8	8
UN Number:	2491	2491	2491
Packing Group:	III	III	III

Section 15 - Regulatory Information

European/International Regulations	
European Labeling in Accordance with EC Directives	
Hazard Symbols: C	
Risk Phrases:	
<ul style="list-style-type: none"> ➤ R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed. ➤ R 34 Causes burns. 	
Safety Phrases	
<ul style="list-style-type: none"> ➤ S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. ➤ S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection. ➤ S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). 	
WGK (Water Danger/Protection)	
<ul style="list-style-type: none"> ➤ CAS# 141-43-5: 1 	
Canada	
<ul style="list-style-type: none"> ➤ CAS# 141-43-5 is listed on Canada's DSL List 	
US Federal	
<ul style="list-style-type: none"> ➤ TSCA ➤ CAS# 141-43-5 is listed on the TSCA Inventory. 	

Section 16 - Other Information

MSDS Creation Date:	July 22, 2015
Revision #0 Date	

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