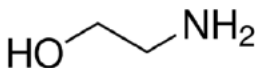


MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

Product form	: Substance
	:
EC Index-No.	: 603-030-00-8
EC-No.	: 205-483-3
CAS-No.	: 141-43-5
Product code	: 00135
Chemical structure	: 
Synonyms	: Monoethanolamine / 2-Aminoethyl alcohol / 2-Aminoethano

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

1.2.1. Relevant identified uses

Industrial/Professional use spec	: Industrial For professional use only
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1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Labogens Fine Chem Industries
1st Floor , Above Bank of India, Guru Vihar , Rahon Road,
Ludhiana Pb. (141007)
+91 9316777775, +91 7707855700
sales@labogens.com - www.Labogens.com

1.4. Emergency telephone number

Emergency number	: +91 7707855700 (9:00am - 6:00 pm)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 1B	H314
Serious eye damage/eye irritation, Category 1	H318
Acute toxicity (dermal), Category 4	H312
Acute toxicity (inhal.), Category 4	H332
Acute toxicity (oral), Category 4	H302

Full text of H statements : see section 16

ETHANOLAMINE (MONO) AR/ACS

Safety Data Sheet

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xn; R20/21/22

C; R34

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

GHS07

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled
H314 - Causes severe skin burns and eye damage.

Precautionary statements (CLP) :

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/doctor

EUH-statements

: EUH071 - Corrosive to the respiratory tract.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : ETHANOLAMINE (MONO) AR/ACS

CAS-No. : 141-43-5

EC-No. : 205-483-3

EC Index-No. : 603-030-00-8

Full text of R- and H-statements: see section 16

3.2. Mixtures

Not applicable

ETHANOLAMINE (MONO) AR/ACS

Safety Data Sheet

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. Specific treatment is urgent (see supplemental first aid instruction on this label).
- First-aid measures after skin contact : Immediately call a POISON CENTER/doctor. Specific measures (see supplemental first aid instruction on this label). Wash with plenty of water/... Wash contaminated clothing before reuse. Take off immediately all contaminated clothing. Rinse skin with water/shower.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Specific treatment (see supplemental first aid instruction on this label).
- First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER/doctor if you feel unwell. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. Specific treatment (see supplemental first aid instruction on this label).

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/effects : Causes severe skin burns and eye damage.
- Symptoms/effects after inhalation : Corrosive to the respiratory tract.
- Symptoms/effects after skin contact : Repeated exposure to this material can result in absorption through skin causing significant health hazard. Harmful in contact with skin.
- Symptoms/effects after eye contact : Causes serious eye damage.
- Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂).
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Use personal protective equipment as required.
- Emergency procedures : Stop release.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

6.4. Reference to other sections

No additional information available

ETHANOLAMINE (MONO) AR/ACS

Safety Data Sheet

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Do not breathe dust/fume/gas/mist/vapours/spray.
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Comply with applicable regulations.
Storage conditions	: Store in original container. Store in a dry place. Protect from moisture.
Packaging materials	: Do not store in corrodable metal.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection	: protective gloves
Eye protection	: Chemical goggles or face shield
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: [In case of inadequate ventilation] wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Clear Colorless.
Odour	: ammonia odor.
Odour threshold	: No data available
pH	: 12.1
Relative evaporation rate (butylacetate=1)	: < 1
Melting point	: 10 - 11
Freezing point	: No data available
Boiling point	: 170 °C
Flash point	: 86 °C
Auto-ignition temperature	: 780 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available

ETHANOLAMINE (MONO) AR/ACS

Safety Data Sheet

Vapour pressure	: 0.3 hPa at 20 °C
Relative vapour density at 20 °C	: 2.1
Relative density	: No data available
Density	: 1.012 g/cm ³
Solubility	: Water: Miscible in water
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 0.025 - 0.17 vol %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Direct sunlight. Overheating. Open flame. Heat. Sparks.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Thermal decomposition generates : Corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Dermal: Harmful in contact with skin. Inhalation: Harmful if inhaled. Oral: Harmful if swallowed.
Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 12.1
Serious eye damage/irritation	: Causes serious eye damage. pH: 12.1
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

ETHANOLAMINE (MONO) AR/ACS

Safety Data Sheet

Reproductive toxicity : Not classified
STOT-single exposure : Not classified
Additional information : Corrosive to the respiratory tract.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : Harmful if swallowed. Harmful in contact with skin.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 2491
UN-No. (IMDG) : 2491
UN-No. (IATA) : 2491
UN-No. (ADN) : 2491

ETHANOLAMINE (MONO) AR/ACS

Safety Data Sheet

UN-No. (RID) : 2491

14.2. UN proper shipping name

Proper Shipping Name (ADR) : ETHANOLAMINE
Proper Shipping Name (IMDG) : ETHANOLAMINE
Proper Shipping Name (IATA) : Ethanolamine
Proper Shipping Name (ADN) : ETHANOLAMINE
Proper Shipping Name (RID) : ETHANOLAMINE
Transport document description (ADR) : UN 2491 ETHANOLAMINE, 8, III, (E)
Transport document description (IMDG) : UN 2491 ETHANOLAMINE, 8, III
Transport document description (IATA) : UN 2491 Ethanolamine, 8, III
Transport document description (ADN) : UN 2491 ETHANOLAMINE, 8, III
Transport document description (RID) : UN 2491 ETHANOLAMINE, 8, III

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 8
Danger labels (ADR) : 8



IMDG

Transport hazard class(es) (IMDG) : 8
Danger labels (IMDG) : 8



IATA

Transport hazard class(es) (IATA) : 8
Hazard labels (IATA) : 8



ADN

Transport hazard class(es) (ADN) : 8
Danger labels (ADN) : 8



RID

Transport hazard class(es) (RID) : 8

ETHANOLAMINE (MONO) AR/ACS

Safety Data Sheet

Danger labels (RID) : 8



14.4. Packing group

Packing group (ADR) : III
Packing group (IMDG) : III
Packing group (IATA) : III
Packing group (ADN) : III
Packing group (RID) : III

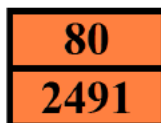
14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : C7
Limited quantities (ADR) : 5I
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P001, IBC03, LP01, R001
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T4
Portable tank and bulk container special provisions (ADR) : TP1
Tank code (ADR) : L4BN
Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V12
Hazard identification number (Kemler No.) : 80
Orange plates :



Tunnel restriction code (ADR) : E
EAC code : 2X

- Transport by sea

Special provisions (IMDG) : 223
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : P001, LP01
IBC packing instructions (IMDG) : IBC03
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP1
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-B
Stowage category (IMDG) : A

ETHANOLAMINE (MONO) AR/ACS

Safety Data Sheet

Segregation (IMDG) : SG35
MFAG-No : 153

- Air transport

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y841
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 852
PCA max net quantity (IATA) : 5L
CAO packing instructions (IATA) : 856
CAO max net quantity (IATA) : 60L
Special provisions (IATA) : A3
ERG code (IATA) : 8L

- Inland waterway transport

Classification code (ADN) : C7
Limited quantities (ADN) : 5 L
Excepted quantities (ADN) : E1
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EP
Number of blue cones/lights (ADN) : 0

- Rail transport

Classification code (RID) : C7
Limited quantities (RID) : 5L
Excepted quantities (RID) : E1
Packing instructions (RID) : P001, IBC03, LP01, R001
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T4
Portable tank and bulk container special provisions (RID) : TP1
Tank codes for RID tanks (RID) : L4BN
Transport category (RID) : 3
Special provisions for carriage – Packages (RID) : W12
Colis express (express parcels) (RID) : CE8
Hazard identification number (RID) : 80

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

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

ETHANOLAMINE (MONO) AR/ACS is not on the REACH Candidate List

ETHANOLAMINE (MONO) AR/ACS is not on the REACH Annex XIV List

ETHANOLAMINE (MONO) AR/ACS

Safety Data Sheet

15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) 1, low hazard to water (Classification according to AwSV; ID No. 94)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Denmark

Class for fire hazard : Class III-1

Store unit : 50 liter

Classification remarks : Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-statements:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
EUH071	Corrosive to the respiratory tract.
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed
R34	Causes burns
C	Corrosive

ETHANOLAMINE (MONO) AR/ACS

Safety Data Sheet

Xn	Harmful
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This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product