

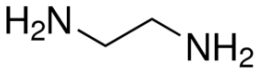
ETHYLENEDIAMINE FOR SYNTHESIS

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
SDS Reference Number: 00140
Issue date: 4/9/2014 Revision date: 1/23/2025 Supersedes version of: 4/9/2015 Version: 1.0

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

1.1. Product identifier

Product form : Substance
Trade name : ETHYLENEDIAMINE FOR SYNTHESIS
IUPAC name : Ethane-1,2-diamine
EC Index-No. : 612-006-00-6
EC-No. : 203-468-6
CAS-No. : 107-15-3
Product code : 00140
Type of product : Amines
Formula : C₂H₈N₂
Chemical structure : 

Synonyms : 1,2-Diaminoethane, Edamine

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

Relevant identified uses

Industrial/Professional use spec : Industrial
For professional use only
Use of the substance/mixture : Laboratory chemicals
Manufacture of substances

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai
INDIA
T +91 22 6663 6663, F +91 22 6663 6699
info@lobachemie.com, www.lobachemie.com

1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flammable liquids, Category 3	H226
Acute toxicity (oral), Category 4	H302
Acute toxicity (dermal), Category 4	H312
Skin corrosion/irritation, Category 1	H314
Respiratory sensitisation, Category 1	H334
Skin sensitisation, Category 1	H317

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

Adverse physicochemical, human health and environmental effects

No additional information available

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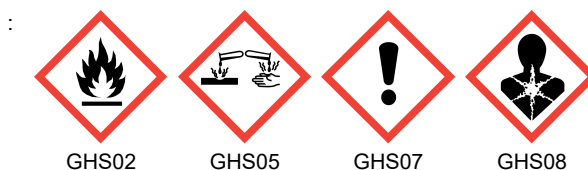
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2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

Hazard statements (CLP)

Precautionary statements (CLP)

: Danger
H226 - Flammable liquid and vapour.
H302+H312 - Harmful if swallowed or in contact with skin.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
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 .
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	ETHYLENEDIAMINE (107-15-3)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	ETHYLENEDIAMINE (107-15-3)

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type

: Mono-constituent

Name	Product identifier	%
ETHYLENEDIAMINE substance listed as REACH Candidate	CAS-No.: 107-15-3 EC-No.: 203-468-6 EC Index-No.: 612-006-00-6	100

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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. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
First-aid measures after skin contact	: Take off immediately all contaminated clothing. Rinse skin with water/shower. 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. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instruction on this label).
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.
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.

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

Symptoms/effects	: Causes severe skin burns and eye damage.
Symptoms/effects after inhalation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
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 (CO ₂).
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Flammable liquid and vapour.
Explosion hazard	: May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.
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For non-emergency personnel

Emergency procedures	: Evacuate unnecessary personnel.
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For emergency responders

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

6.2. Environmental precautions

Avoid release to the environment.

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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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
Precautions for safe handling : No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid breathing 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. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Comply with applicable regulations.
Storage conditions : Keep container tightly closed. Store in original container. Store in a dry place.
Incompatible materials : Heat sources.

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

Personal protection equipment

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Chemical goggles or face shield

Skin protection

Skin and body protection:

Wear a mask

Hand protection:

Protective gloves

Respiratory protection

Respiratory protection:

Wear appropriate mask

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless to Light yellow.
Appearance	: Clear liquid.
Molecular mass	: 60.1 g/mol
Odour	: amine like.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: 8.5 °C
Boiling point	: 116 – 118 °C
Flammability	: Flammable liquid and vapour.
Lower explosion limit	: 2.7 vol %
Upper explosion limit	: 16 vol %
Flash point	: 34 °C
Auto-ignition temperature	: 385 °C
Decomposition temperature	: > 120 °C
pH	: 11.9 at 25 °C
pH solution concentration	: 25 %
Viscosity, kinematic	: 0.017 mm²/s
Viscosity, dynamic	: 0.015 cP at 25 °C
Solubility	: Water: Miscible with water
Partition coefficient n-octanol/water (Log Kow)	: Not available
Partition coefficient n-octanol/water (Log Pow)	: 2.04
Vapour pressure	: 12.1 mm Hg at 25 °C
Vapour pressure at 50°C	: Not available
Density	: 0.89 g/cm³ at 25 °C
Relative density	: Not available
Relative vapour density at 20°C	: 2.07 (Air = 1)
Particle characteristics	: Not applicable

9.2. Other information

Other safety characteristics

Refractive index	: 1.4565 at 20 °C/D
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SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

10.2. Chemical stability

Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

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

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

May release flammable gases. Thermal decomposition generates : Corrosive vapours.

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SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Harmful in contact with skin.
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Causes severe skin burns. pH: 11.9 at 25 °C
Serious eye damage/irritation	: Assumed to cause serious eye damage pH: 11.9 at 25 °C
Respiratory or skin sensitisation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

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Viscosity, kinematic	0.017 mm²/s
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11.2. Information on other hazards

Other information

Potential adverse human health effects and symptoms	: Harmful if swallowed,Harmful in contact with skin.
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SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

12.2. Persistence and degradability

ETHYLENEDIAMINE FOR SYNTHESIS (107-15-3)

Persistence and degradability	Rapidly degradable
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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

Component

Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	ETHYLENEDIAMINE (107-15-3)
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Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	ETHYLENEDIAMINE (107-15-3)
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12.6. Endocrine disrupting properties

No additional information available

12.7. 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.
Additional information	: Handle empty containers with care because residual vapours are flammable.

SECTION 14: Transport information

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

14.1. UN number or ID number

UN-No. (ADR)	: UN 1604
UN-No. (IMDG)	: UN 1604
UN-No. (IATA)	: UN 1604
UN-No. (ADN)	: UN 1604
UN-No. (RID)	: UN 1604

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: ETHYLENEDIAMINE
Proper Shipping Name (IMDG)	: ETHYLENEDIAMINE
Proper Shipping Name (IATA)	: Ethylenediamine
Proper Shipping Name (ADN)	: ETHYLENEDIAMINE
Proper Shipping Name (RID)	: ETHYLENEDIAMINE
Transport document description (ADR) (ADR)	: UN 1604 ETHYLENEDIAMINE, 8 (3), II, (D/E)
Transport document description (IMDG)	: UN 1604 ETHYLENEDIAMINE, 8 (3), II (34°C c.c.)
Transport document description (IATA)	: UN 1604 Ethylenediamine, 8 (3), II
Transport document description (ADN)	: UN 1604 ETHYLENEDIAMINE, 8 (3), II
Transport document description (RID)	: UN 1604 ETHYLENEDIAMINE, 8 (3), II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: 8 (3)
Danger labels (ADR)	: 8, 3



IMDG

Transport hazard class(es) (IMDG)	: 8 (3)
Danger labels (IMDG)	: 8, 3



IATA

Transport hazard class(es) (IATA)	: 8 (3)
Danger labels (IATA)	: 8, 3

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ADN

Transport hazard class(es) (ADN)

: 8 (3)

Danger labels (ADN)

: 8, 3



RID

Transport hazard class(es) (RID)

: 8 (3)

Danger labels (RID)

: 8, 3



14.4. Packing group

Packing group (ADR)

: II

Packing group (IMDG)

: II

Packing group (IATA)

: II

Packing group (ADN)

: II

Packing group (RID)

: II

14.5. Environmental hazards

Dangerous for the environment

: No

Marine pollutant

: No

EmS-No. (Fire)

: F-E

EmS-No. (Spillage)

: S-C

Other information

: No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR)

: CF1

Limited quantities (ADR)

: 1I

Excepted quantities (ADR)

: E2

Packing instructions (ADR)

: P001, IBC02

Mixed packing provisions (ADR)

: MP15

Portable tank and bulk container instructions (ADR)

: T7

Portable tank and bulk container special provisions (ADR)

: TP2

Tank code (ADR)

: L4BN

Vehicle for tank carriage

: FL

Transport category (ADR)

: 2

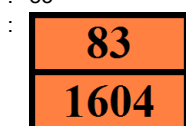
Special provisions for carriage - Operation (ADR)

: S2

Hazard identification number (Kemler No.)

: 83

Orange plates



Tunnel restriction code (ADR)

: D/E

EAC code

: •2W

APP code

: A(fl)

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Transport by sea

Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP2
Stowage category (IMDG)	: A
Stowage and handling (IMDG)	: SW2
Segregation (IMDG)	: SGG18, SG35
Flash point (IMDG)	: 34°C c.c.
Properties and observations (IMDG)	: Volatile, colourless, hygroscopic flammable liquid with an ammonia-like odour. Flashpoint: 34°C c.c. Miscible with water. Causes burns to skin, eyes and mucous membranes. Reacts violently with acids.
MFAG-No	: 132

Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y840
PCA limited quantity max net quantity (IATA)	: 0.5L
PCA packing instructions (IATA)	: 851
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 855
CAO max net quantity (IATA)	: 30L
ERG code (IATA)	: 8F

Inland waterway transport

Classification code (ADN)	: CF1
Limited quantities (ADN)	: 1 L
Excepted quantities (ADN)	: E2
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 1

Rail transport

Classification code (RID)	: CF1
Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001, IBC02
Mixed packing provisions (RID)	: MP15
Portable tank and bulk container instructions (RID)	: T7
Portable tank and bulk container special provisions (RID)	: TP2
Tank codes for RID tanks (RID)	: L4BN
Transport category (RID)	: 2
Colis express (express parcels) (RID)	: CE6
Hazard identification number (RID)	: 83

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

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REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Listed on the REACH Candidate List: Ethylenediamine
Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (2024/590)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

National regulations

France

Occupational diseases	
Code	Description
RG 49	Skin disorders caused by aliphatic, alicyclic amines or ethanolamines
RG 49 BIS	Respiratory disorders caused by aliphatic amines, ethanolamines or isophoronediamine

Germany

VOC ordinance (ChemVOCFarbV) :
Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV).
Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed
SZW-lijst van mutagene stoffen : The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling : The substance is not listed

Denmark

Class for fire hazard : Class II-1
Store unit : 5 liter
Classification remarks : R10 <H226;H302+H312;H314;H317;H334>; Emergency management guidelines for the storage of flammable liquids must be followed
Danish National Regulations : 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

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SECTION 16: Other information

Full text of H- and EUH-statements:	
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Flam. Liq. 3	Flammable liquids, Category 3
Resp. Sens. 1	Respiratory sensitisation, Category 1
Skin Corr. 1	Skin corrosion/irritation, Category 1
Skin Sens. 1	Skin sensitisation, Category 1
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Safety Data Sheet (SDS), EU

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.