

Safety Data Sheet

I. Identification of the Substance/ Preparation and Company

Product Information: Aminoethylethanolamine

Other Information: —

Suggested use and restricted use: Mainly used as the raw material of cationic and zwitterionic surfactants; it can also be used as the raw material of epoxy resin curing agent and other fine chemical products.

Information on Producer/Supplier Name, Addresses, Phone:

Lin Yuan Plant, Oriental Union Chemical Corporation No.3 Industrial 3rd Rd., Industrial Zone

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II. Hazard Identification:

Hazard Category: Skin sensitization(Category 1), Skin corrosion/irritation(Category 1), Serious eye damage/eye irritation(Category 1), Respiratory sensitization(Category 1)

Labeled Contents:



Warning sign: Danger

Hazard Warning Information:

May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
Causes severe skin burns and eye damage.
Causes serious eye damage

Hazard Prevention Measures: Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

In case of contact with eyes, immediately wash with plenty of water and consult medical treatment.

Do not breathe gas/fumes/vapors/mist.

Other Hazards: —

III. Composition / Information on Ingredients (Single)

English name: Aminoethylethanolamine

Symitly name: N-(2-Aminoethyl)ethanolamine;
 2-(2-Aminoethylamino)ethanol~N-(2-Aminoethyl)ethanolamine; AMINOETHYLETHANOLAMIN;
 AMINOETHYLETHANOLAMINE; AMINOETHYETHANOLAMINE; AEEA;
 HYDROXYETHYL-ETHYLENEDIAMINE; LABOTEST-BB LTBB000455;
 N-HYDROXYETHYL-1,2-ETHANEDIAMINE; N-AMINOETHYL ETHANOLAMINE;
 N-(B-AMINOETHYL)ETHANOLAMINE; N-B-HYDROXYETHYLETHYLENEDIAMINE;
 N-(2-HYDROXYETHYL)ETHANE DIAMINE; N-(2-hydroxyethyl)ethane-1,2-diaminium;
 N-ethyl-N-hydroxyethane-1,2-diamine; 2-[(1-aminoethyl)amino]ethanol

Chemical Abstracts Number (CAS No.): 111-41-1

Percentage for Chemical Ingredient (%): 100%

IV. First Aid Measures

Emergency and First Aid Procedures:

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

The most important symptoms and harmful effects: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

First-Aid Personal Protection:

First aid should be performed in safe areas wearing Class C protective equipment.

Prompt to Doctor: 1. For inhaled patients, it is recommended to supply oxygen. 2. When swallowed, avoid gastric lavage and induce vomiting.

V. Fire Fighting Measure

Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO₂) Dry powder

Special hazards arising from the substance or mixture:

Carbon oxides

Nitrogen oxides (NO_x)

Combustible.

Fire may cause evolution of:

nitrogen oxides

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapours possible in the event of fire.

Special fire fighting procedures:

1. Move the container away from the fire when it is safe to do so.
2. Cool fire exposed storage tanks or containers with water mist until the fire is extinguished.
3. Keep away from both ends of the storage tank.
4. Use a fire extinguishing agent suitable for the surrounding area of the fire.
5. Do not spray water directly on this substance.
6. In the event of a large fire, spray water mist to extinguish the fire, use water mist to reduce steam, and use water mist to cool the storage tanks or containers exposed to the fire until the fire is extinguished.
7. Fire the fire from a safe distance or protected area.
8. Avoid breathing the substance and combustion by-products.
9. Stay upwind, away from low-lying areas.
10. Extinguishing with water or foam may cause foaming

Special Protective Equipment:

Wear full body chemical protective clothing and air respirator (add anti flash aluminum coating if necessary).

VI. Accidental Release Measures

Personal Protection:

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

Environmental Protection:

Do not let product enter drains.

How to clean up:

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemisorb®). Dispose of properly. Clean up affected area.

VII. Handling and Storage

Precautions for safe handling:**Advice on safe handling:**

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Conditions for safe storage, including any incompatibilities:**Storage conditions:**

Protected from light. Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Recommended storage temperature see product label.

VIII. Exposure Control / Personal Protection:

Engineering control:

According to the available information, no additional ventilation system is required.

Control Factor			
TWA	STEL	CEILING	BEIs

Personal protective equipment:**Eye/face protection:**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety.

Goggles

Skin and Body Protection:

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Respiratory protection:

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic Compounds The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Hand Protection: Chemical protective gloves.

Control of environmental exposure:

Do not let product enter drains.

IX. Physical and Chemical Properties / Characteristics

Appearance: colorless to yellow liquid	Odor: ammoniacal
Odor threshold: —	Melting point: —
PH: Alkaline in aqueous solution	Boiling Point / Boiling Range: 243°C
Flammability: —	Flashfire: 132°C
Decomposition Temperature: —	Test Method: <input type="checkbox"/> open cup <input checked="" type="checkbox"/> close cup
Spontaneous Temperature: 368°C	Explosion Limits: 1%~8%
Vapor pressure: < 0.1 mmHg (20°C)	Vapor density: 3.59(air=1)
Density: 1.03(water=1)	Solubility: Soluble in water, alcohol, acetone; slightly soluble in ethers
Log kow: —	Percent volatile: —

X. Stability and Reactivity**Reactivity:**

Forms explosive mixtures with air on intense heating.

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

Possibility of hazardous reactions:

Violent reactions possible with:

Oxidizing agents

acids

Caution! In contact with nitrites, nitrates, nitrous acid possible liberation of nitrosamines!

Chemical stability: The product is chemically stable under standard ambient conditions (room temperature) .

Conditions to avoid: Avoid moisture.Strong heating.

Incompatible materials:

Copper, Zinc

Hazardous decomposition products:

In the event of fire: see section 5

XI. Toxicological Information

Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 3.000 mg/kg

Remarks: (RTECS)

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

LD50 Dermal - Rabbit - > 2.000 mg/kg

Remarks: (External MSDS)

Skin corrosion/irritation

Skin - Rabbit

Result: Causes burns.

Remarks: (External MSDS)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Causes burns.

Remarks: (RTECS)

Causes serious eye damage.

Respiratory or skin sensitization

In animal experiments:

Result: positive

Remarks: (External MSDS)

Germ cell mutagenicity

Test Type: Ames test

Result: negative

Remarks: (External MSDS)

Carcinogenicity

No data available

Reproductive toxicity

May damage the unborn child.

Suspected of damaging fertility.

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea Under given conditions, contact with nitrites or nitric acid can lead to the formation of nitrosamines, which have shown themselves to be carcinogenic in animal experiments. Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

XII. Ecological Information

Ecotoxicity: LC50 (Fish): —
 EC50 (aquatic invertebrate): —
 BCF: —

Persistence and degradation:
 Biodegradability Result: 0 % - Not readily biodegradable.
 (OECD Test Guideline 301C)

Bioaccumulation: —

Mobility in the soil: —

Other adverse effects: —

XIII. Disposal Information

Disposal method:

1. Refer to relevant regulations for disposal.
2. Recycle as much as possible or contact the manufacturer for recycling.
3. Incinerate residues in qualified places.
4. Recycle containers if possible, or dispose of in qualified landfills. Contaminated packaging.

XIV. Transport Information

UN No. 2735

United Nations Transport Name: AMINES, LIQUID, CORROSIVE, N.O.S.
 (2-(2-Aminoethylamine)ethanol)

Classification of transport hazards: ADR/RID: 8 IMDG: 8 IATA: 8

Packing category: ADR/RID: II IMDG: II IATA: II

Marine Pollutants (Yes / No): No

Special shipping methods and notes: —

XV. Regulation Information

Applicable regulations:

1. Occupational Safety and Health Act
2. Regulation of Labelling and Hazard Communication of Hazardous Chemicals
3. Standards of Permissible Exposure Limits at Job Site
4. Traffic Safety Regulation
5. Criteria Governing Methods of and Facilities for Storage, Clearance and Disposal of Industrial Wastes
6. Establishment Standard and Safety Control Regulation for Manufacturing, Storing, Processing Public Hazardous Substances and Flammable Pressurized Gases Places
7. Hazardous Chemicals Assessment and Classification Management Measures
8. Regulations for the Occupational Safety and Health Equipments and Measures
9. Designation and Operational Management of Priority Management Chemicals

XVI. Other Information

Reference	1. Ministry of Labour's Department of Occupational Safety and Health Administration Chemicals Global Reconciliation System(GHS)Chinese introduction website http://ghs.osha.gov.tw/CHT/masterpage/index_CHT.aspx 2. GENERIC EU MSDS according to Regulation (EC) No. 1907/2006 3. Merck Chemicals SDS			
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Note	The "-" symbol in the text above indicates that there is no current available data while the "/" symbol indicates that this field is not applicable to this substance.			