

Chemical Safety Data Sheet MSDS / SDS

ETHYLENEDIAMINE MONOHYDRATE

Revision Date:2026-05-31 Revision Number:1

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

Product identifier

Product name : ETHYLENEDIAMINE MONOHYDRATE
CBnumber : CB9117468
CAS : 6780-13-8
Synonyms : Ethylenediamine monohydrate,1,2-ethanediamine monohydrate

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.
Uses advised against : none

Company Identification

Company : Chemicalbook
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone : 010-86108875

SECTION 2: Hazards identification

GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Danger

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P501 Dispose of contents/container to.....
P330 Rinse mouth.
P301+P312 IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell.
P270 Do not eat, drink or smoke when using this product.
P264 Wash skin thoroughly after handling.
P501 Dispose of contents/container to.....
P363 Wash contaminated clothing before reuse.
P321 Specific treatment (see ... on this label).

P333+P313 IF SKIN irritation or rash occurs: Get medical advice/attention.

P302+P352 IF ON SKIN: wash with plenty of soap and water.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P272 Contaminated work clothing should not be allowed out of the workplace.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P501 Dispose of contents/container to.....

P363 Wash contaminated clothing before reuse.

P322 Specific measures (see ...on this label).

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P302+P352 IF ON SKIN: wash with plenty of soap and water.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P501 Dispose of contents/container to.....

P342+P311 IF experiencing respiratory symptoms: call a POISON CENTER or doctor/physician.

P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P285 In case of inadequate ventilation wear respiratory protection.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P501 Dispose of contents/container to.....

P405 Store locked up.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (see ... on this label).

P310 Immediately call a POISON CENTER or doctor/physician.

P304+P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.

P363 Wash contaminated clothing before reuse.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Hazard statements

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

H312 Harmful in contact with skin

H226 Flammable liquid and vapour

H314 Causes severe skin burns and eye damage

H317 May cause an allergic skin reaction

H302 Harmful if swallowed

SECTION 3: Composition/information on ingredients

Substance

Product name	: ETHYLENEDIAMINE MONOHYDRATE
Synonyms	: Ethylenediamine monohydrate, 1,2-ethanediamine monohydrate
CAS	: 6780-13-8
MF	: C ₂ H ₁₀ N ₂ O
MW	: 78.11

SECTION 4: First aid measures

If inhaled

Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.

In case of skin contact

Take off all contaminated clothing immediately. If on skin, rinse well with water. Call a POISON CENTER or doctor/ physician.

In case of eye contact

Rinse with plenty of water. If easy to do, remove contact lens, if worn. Immediately call a POISON CENTER or doctor/ physician.

If swallowed

Immediately call a POISON CENTER or doctor/ physician. Rinse mouth. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

None known.

SECTION 5: Firefighting measures

Suitable extinguishing media

Dry powder, Foam, Water spray, Carbon dioxide (CO₂)

Specific hazards during fire fighting

No information available.

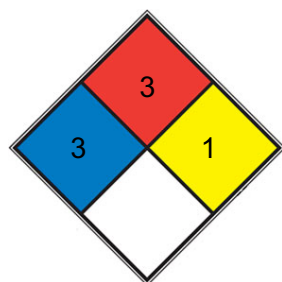
Specific extinguishing methods

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Immediately evacuate personnel to safe areas. Remove undamaged containers from fire area if it is safe to do so.

Special protective equipment for fire-fighters

Use personal protective equipment.

NFPA 704



■ HEALTH 3 Short exposure could cause serious temporary or moderate residual injury (e.g. [liquid hydrogen](#), [sulfuric acid](#), [calcium hypochlorite](#), hexafluorosilicic acid)

Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature

☒ FIRE 3 conditions . Liquids having a flash point below 22.8 °C (73 °F) and having a boiling point at or above 37.8 °C (100 °F) or having a flash point between 22.8 and 37.8 °C (73 and 100 °F). (e.g. gasoline, [acetone](#))

☒ REACT 1 Normally stable, but can become unstable at elevated temperatures and pressures (e.g. [propene](#))

☐ SPEC.

☐ HAZ.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear suitable protective equipment. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.

Environmental precautions

Prevent product from entering drains.

Methods and materials for containment and cleaning up

Collect as much of the spill as possible with a suitable material.

SECTION 7: Handling and storage

Handling

Technical measures

Prevent generation of vapor or mist. Take precautionary measures against static discharge. Use explosion-proof equipment.

Local/Total ventilation

Ensure adequate ventilation. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Use a local exhaust ventilation.

Advice on safe handling

Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not subject to grinding, shock or friction. Wash hands and face thoroughly after handling.

Avoidance of contact

Oxidizing agents, Acids, Metals

Storage

Conditions for safe storage

Keep container tightly closed. Store in a cool and shaded area. Keep in a well-ventilated place. Use explosion-proof equipment. Keep under inert gas. Store locked up.

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures

Install a closed system or local exhaust.

Also install safety shower and eye bath.

Personal protective equipment

Respiratory protection

Gas mask

Self-contained breathing apparatus

Eye/face protection

Safety glasses

Safety goggles

Face-shield

Skin and body protection

Impervious protective clothing

Hand protection

Impervious gloves *Use personal protective equipment(PPE) approved under appropriate government standards and follow local and national regulations.

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

liquid

Color

colorless - yellow

Odor

No data available

Odor Threshold

No data available

pH

11.9 (25 °C) (as aqueous solution)

Melting point/freezing point

10 °C

Boiling point/boiling range

118 °C

Flash point

34°C

Evaporation rate

No data available

Flammability

No data available

Upper explosion limit / Upper flammability limit

2.7-16.6% (v/v)

Lower explosion limit / Lower flammability limit

2.7-16.6% (v/v)

Vapor pressure

12 hPa (20 °C)

Relative density

0.96

Solubility(ies)**Water solubility**

No data available

Solubility in other solvents

No data available

Partition coefficient: n-octanol/water

-1.2

Autoignition temperature

No data available

Decomposition temperature

No data available

Viscosity**Viscosity, dynamic**

No data available

Viscosity, kinematic

No data available

Molecular weight

78.12 g/mol

Physical state

clear liquid

SECTION 10: Stability and reactivity

Reactivity

No data available

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Electrical spark Open flame Electrostatic discharge Exposure to air.

Incompatible materials

Oxidizing agents, Acids, Metals

Hazardous decomposition products

Carbon monoxide, Carbon dioxide (CO₂), Nitrogen oxides (NO_x)

SECTION 11: Toxicological information

Acute toxicity

Product

Acute oral toxicity

Assessment: The component/mixture is moderately toxic after single ingestion.

Acute dermal toxicity

Assessment: The component/mixture is toxic after single contact with skin.

Components

Ethylenediamine Monohydrate

Acute oral toxicity

Assessment: The component/mixture is moderately toxic after single ingestion.

Acute dermal toxicity

Assessment: The component/mixture is toxic after single contact with skin.

Skin corrosion/irritation

Product

Result

Causes burns.

Components

Ethylenediamine Monohydrate

Result

Causes burns.

Serious eye damage/eye irritation

Product

Result

Irreversible effects on the eye

Components

Ethylenediamine Monohydrate

Result

Irreversible effects on the eye

Respiratory or skin sensitization

Product

Assessment

May cause sensitization by inhalation.

Components

Ethylenediamine Monohydrate

Assessment

May cause sensitization by inhalation.

Assessment

May cause sensitization by skin contact.

Germ cell mutagenicity

Classified based on available data. For more details, see section 2.

Carcinogenicity

Classified based on available data. For more details, see section 2.

Reproductive toxicity

Classified based on available data. For more details, see section 2.

STOT-single exposure

Product

Target Organs

Blood, Respiratory system, Kidney

Assessment

Causes damage to organs.

Components

Ethylenediamine Monohydrate

Target Organs

Blood, Respiratory system, Kidney

Assessment

Causes damage to organs.

STOT-repeated exposure

Product

Target Organs

Liver, Kidney

Assessment

May cause damage to organs through prolonged or repeated exposure.

Components

Ethylenediamine Monohydrate

Target Organs

Liver, Kidney

Assessment

May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Classified based on available data. For more details, see section 2.

Aspiration toxicity

Classified based on available data. For more details, see section 2.

SECTION 12: Ecological information

Ecotoxicity

Product:

Ecotoxicology Assessment

Acute aquatic toxicity

Toxic to aquatic life.

Components:

Ethylenediamine Monohydrate:

Ecotoxicology Assessment

Acute aquatic toxicity

Toxic to aquatic life.

Persistence and degradability

No data available

Bioaccumulative potential

Components:

Ethylenediamine Monohydrate:

octanol/water

Partition coefficient: octanol/water

-1.2

Mobility in soil

Components:

Ethylenediamine Monohydrate:

Distribution among environmen-

Koc: 4766 tal compartments

Other adverse effects

No data available

SECTION 13: Disposal considerations

Disposal methods

Waste from residues

Disposal in accordance with local and national regulations. Take precautions against ignition or explode. Entrust disposal to a licensed waste disposal company.

Contaminated packaging

Disposal in accordance with local and national regulations. Before disposal of used container, remove contents completely.

SECTION 14: Transport information

International Regulations

IATA-DGR

UN/ID No.

UN 1604

Proper shipping name

Ethylenediamine

Class

8

Subsidiary risk

3

Packing group

II

IMDG-Code

UN number

UN 1604

Proper shipping name

ETHYLENEDIAMINE

Class

8

Subsidiary risk

3

Packing group

II

EmS Code

F-E, S-C

Domestic regulation

GB 6944/12268

UN number

UN 1604

Proper shipping name

ETHYLENEDIAMINE

Class

8

Subsidiary risk

3

Packing group

II

SECTION 15: Regulatory information

Regulations on Safety Management of Hazardous Chemicals**Catalogue of Hazardous Chemicals**

Listed

The ingredients of this product are reported in the following inventories**CH BAGREG**

Not in compliance with the inventory

TSCA

Substance(s) not listed on TSCA inventory

AICS

On the inventory, or in compliance with the inventory

DSL

This product contains the following components that are not on the Canadian DSL nor NDSL.

Ethylenediamine Monohydrate

ENCS

Not in compliance with the inventory

ISHL

Not in compliance with the inventory

KECI

Not 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

NZIoC

Not in compliance with the inventory

SECTION 16: Other information

Abbreviations and acronyms

CAS: Chemical Abstracts Service

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

LD50: Lethal Dose 50%

LC50: Lethal Concentration 50%

EC50: Effective Concentration 50%

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

DOT: US Department of Transportation

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.