



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

### 1.1 Product identifier:

**Trade name:** Ethylenediamine 2,5%

**Product number:** 600935

**CAS No.:** 107-15-3

**EINECS:** 203-468-6

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

**Application of the substance / the mixture:** Laboratory, Research or Fabricage.

### 1.3 Details of the supplier of the safety data sheet:

#### *Downstream user*

Identipack B.V.

Tel: (+31) (0)493—672277

Broekstraat 4

Fax: (+31) (0)493—672268

5711 CT Someren

E-mail: info@identipack.com

NETHERLANDS

### 1.4 Emergency telephone number:

UK Tel: +44 151 951 3317 - Health and Safety Executive (HSE) Chemicals Regulation Directorate (24/7)

Ireland Tel: +353 1 809 2566 - Beaumont Hospital - National Poisons Information Centre (24/7)

(EU Tel: 112)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture:

**Classification according to Regulation (EC) nr. 1272/2008:**

Flam. Liq. 3: H226 Acute Tox. 4: H302 Skin Corr. 1B: H314 Resp. Sens. 1: H334 Skin Sens. 1: H317

### 2.2 Label elements:

**Labelling according to Regulation (EC) nr. 1272/2008:** The product is labelled according to the CLP Regulation.

#### Hazard pictograms:



GHS02

GHS05

GHS06

GHS08

**Signal word:** Danger

**Hazard determining components of labelling:** Ethylenediamine 2,5% EDA

#### Hazard statements:

H226: Flammable liquid and vapour.

H302: Harmful if swallowed.

H314: Causes severe skin burns and serious eye damage.

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

H317: May cause an allergic skin reaction.



### Precautionary statements:

- P260: Do not breathe dust/fume/gas/mist/vapours/spray.  
P264: Wash hands thoroughly after handling.  
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/shower.  
P363: Wash contaminated clothing before reuse.  
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P310: Immediately call a POISON CENTER/doctor.  
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:

#### Results of PBT and vPvB assessment:

PBT: Not applicable. vPvB: Not applicable.

## SECTION 3: Composition / information on ingredients

### 3.2 Chemical characterisation: Mixtures

**Description:** Mixture made by the following components with other non-hazardous components.

#### Hazardous components:

CAS No.: 107-15-3

EINECS No.: 203-468-6

Index No.: 612-006-00-6



Ethylendiamine 2,5% EDA

Flam. Liq. 3: H226 Acute Tox. 4: H302

Skin Corr. 1B: H314 Resp. Sens. 1: H334

Skin Sens. 1: H317

#### Additional details:

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures:

**General information:** Remove contaminated clothing while protecting yourself.

**After inhalation:** Remove casualty from the hazardous area and take him to the fresh air. Arrange medical treatment.

**In case of skin contact:** Rinse skin areas affected under running water for at least 10 to 20 minutes.

**After eye contact:** Rinse the affected eye with widely spread lids for 10 minutes under running water whilst protecting the unimpaired eye. Then, immediately transport the casualty to an eye doctor / to hospital. Continue rinsing during the transport with water. Danger of serious eye damage.

**In case of ingestion:** Have the casualty rinse his or her mouth and spit out the liquid. Immediately have the casualty drink a glass of water in sips. Do not make the casualty vomit. Under no circumstances apply cooking oil, castor oil, milk or alcohol.

### 4.2 Most important symptoms and effects, both acute and delayed:

Severe irritation through to corrosion to the skin and mucous membranes, sensitizing effect to the skin and airways, allergic skin reaction.

### 4.3 Indication of any immediate medical attention and special treatment needed:

Consult a doctor or poison center (see page 1).

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media:

#### Suitable extinguishing media:

Water (spray - not splash), extinguishing foam, dry extinguishing powder or carbon dioxide (CO<sub>2</sub>).

### 5.2 Special hazards arising from the substance or mixture:

Nitrous gases (nitric oxides, NO<sub>x</sub>) and carbon oxide (CO<sub>x</sub>) can be released in case of a fire.

### 5.3 Advice for firefighters:

In case of ambient fire take normal precautions, extinguish fire from a reasonable distance. Heating causes a rise in pressure, risk of bursting and explosion. Shut off sources of ignition. Beware of backfire.

#### Protective equipment:

Wear self-contained breathing apparatus and special tightly sealed suit.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures:

Shut off sources of ignition. Evacuate area. Warn affected surroundings. Wear protective equipment (see Section 8).

### 6.2 Environmental precautions:

Low hazard to waters. Prevent leaking in water, drainage, sewer or the ground.

Inform the responsible authorities when very large quantities get into water, drainage, sewer, or the ground.

### 6.3 Methods and material for containment and cleaning up:

Take up with an absorbent and dispose of according to regulations. Afterwards ventilate area and wash spill site.

### 6.4 Reference to other sections:

Fire extinguishing measures, see Section 5. Personal protective equipment, see Section 8.

Incompatible materials, see Section 10. Disposal considerations, see Section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling: Handle an open container with care. Avoid any contact when handling the substance.

Do not transport together with incompatible substances. Eye bath required.

### 7.2 Conditions for safe storage, including any incompatibilities:

**Requirements to be met by storerooms and receptacles:** Keep container tightly closed. Store in a cool, dry and well-ventilated place. Preferably use unbreakable containers.

**Information about storage in one common storage facility:** Do not store together with pharmaceuticals, foods, radioactive and explosive substances, strong oxidizing substances, ammonium nitrate.

**Incompatible products:** Aluminium, copper, zinc, zinc alloys, magnesium alloys, acids, oxidizing substances.

### 7.3 Specific end use(s): No further relevant information available.

## SECTION 8: Exposure controls / personal protection

### 8.1 Control parameters:

**Ingredients with limit values that require monitoring at the workplace:**

No specific occupational exposure limits established for this product.

**Additional information:** No further relevant information available.

### 8.2 Exposure controls:

**Personal protective equipment:**

**General protective and hygienic measures:**

Keep away from foods, beverages and other articles of consumption. Wash hands with soap and water before breaks and at the end of work. Avoid contact with skin. Avoid contact with eyes. Avoid inhalation of vapour or mist.

Avoid contact with clothing.

**Respiratory protection:**

Wear respiratory protection (Gas filter A, colour code brown) in an emergency.

Avoid breathing directly above the container.

**Protection of hands:**

Wear protective gloves. The glove material must be sufficiently impermeable and resistant to the substance.

Check the tightness before wear. Gloves should be well cleaned before being removed, then stored in a well ventilated location. Pay attention to skin care. Skin protection cremes do not protect sufficiently against the substance.

Textile or leather gloves are completely unsuitable.

**Material of gloves:**

The following materials are suitable for protective gloves (Permeation time  $\geq$  8 hours):

Butyl rubber - Butyl (0,5 mm)

The following materials are unsuitable for protective gloves because of degradation, severe swelling or low permeation time:

Natural rubber/Natural latex—NR

Polychloroprene - CR

Nitrile rubber/Nitrile latex - NBR

Fluoro carbon rubber - FKM

Polyvinyl chloride - PVC

**Permeation time of glove material:**

This is mentioned above under "Material of gloves".

**Eye/face protection:**

Wear chemical safety goggles.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties:

**Appearance:**

<b>Physical state:</b>	Liquid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Ammonia-like odour
<b>Odour threshold:</b>	Not determined
<b>pH:</b>	Not determined

**Change in condition:**

<b>Melting point/freezing point:</b>	Not determined
<b>Initial boiling point and boiling range:</b>	Not determined
<b>Flash point:</b>	Not determined
<b>Flammability (solid, gas):</b>	Not relevant (liquid)
<b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	No data available
<b>Auto-ignition temperature:</b>	No data available
<b>Explosive properties:</b>	No data available
<b>Explosion limits:</b>	No data available
<b>Lower:</b>	
<b>Upper:</b>	

<b>Vapour pressure at 20 degrees Celsius:</b>	No data available
<b>Density at 20 degrees Celsius:</b>	No data available
<b>Relative density:</b>	No data available
<b>Evaporation rate:</b>	No data available
<b>Solubility in / Miscibility with:</b>	
<b>Water:</b>	Fully mixable with water
<b>Partition coefficient (n-octanol/water):</b>	No data available
<b>Viscosity:</b>	No data available

**9.2 Other information:** No further relevant information available

## SECTION 10: Stability and reactivity

**10.1 Reactivity:** Aqueous solution reacts strongly alkaline. Flammable liquid.

**10.2 Chemical stability:**

**Thermal decomposition / conditions to avoid:** Decomposition when heated. Ammonia as decomposition product.

**10.3 Possibility of hazardous reactions:** Substance reacts dangerously with acids, oxidizing agents, acrolein, acrylonitrile, epoxypropan, acetic anhydride, nitroparaffines, carbon disulphide, silver perchlorate, vinyl acetate, polymerizable substances. Risk of explosion in contact with nitric acid and nitromethane + tetryl.

**10.4 Conditions to avoid:** Keep away from heat and ignition sources.

**10.5 Incompatible materials:** See 10.3

**10.6 Hazardous decomposition products:** See 5.2

## SECTION 11: Toxicological information

**11.1 Information on toxicological effects:**

**Primary irritant effect:**

**Skin corrosion/irritation:** Causes severe skin burns.

**Serious eye damage/irritation:** Causes serious damage to the eyes.

**Respiratory or skin sensitisation:** Shall not be classified as a respiratory or skin sensitizing substance.

**Germ cell mutagenicity:** Shall not be classified as germ cell mutagenic.

**Carcinogenicity:** Shall not be classified as carcinogenic.

**Reproductive toxicity:** Shall not be classified as reproductive toxic.

**STOT single exposure:** Shall not be classified as STOT from single exposure.

**STOT repeated exposure:** Shall not be classified as STOT from repeated exposure.

## SECTION 12: Ecological information

### 12.1 Toxicity:

**Aquatic toxicity:** Low hazard to waters. Prevent penetration into water, drainage, sewer or the ground.  
Inform the responsible authorities about penetration of larger quantities.

**12.2 Persistence and degradability:** Insufficient data available.

**12.3 Bioaccumulative potential:** Insufficient data available.

### 12.4 Mobility in soil:

**Ecotoxic effects:**

**General notes:**

WGK Class 1 - low hazard to waters.

### 12.5 Results of PBT/vPvB assessment:

**PBT:** No further relevant information available.

**vPvB:** No further relevant information available.

**12.6 Other adverse effects:** No further relevant information available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods:

**Recommendation:**

Hazardous waste according to Waste Catalogue Ordinance (AVV).

If there is no way of recycling then the substance and the container must be disposed of in compliance with the respective local/regional/national/international regulations.

Contact a recycling or waste disposal company for safe disposal.

**Uncleaned packaging:**

Uncleaned containers should be treated as hazardous waste, like mentioned above.



## SECTION 14: Transport information

### 14.1 UN number:

ADR: 1604

### 14.2 UN proper shipping name:

ADR: Ethylenediamine

### 14.3 Transport hazard class:

ADR:



Class(es): 8 (Corrosive Substances)

### 14.4 Packing group:

ADR: II (medium danger)

### 14.5 Environmental hazards:

None (non-environmentally hazardous according to the dangerous goods regulations)

### 14.6 Special precautions for user:

Provisions for dangerous goods (ADR) should be complied within the premises.

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

The cargo is not intended to be carried in bulk.

### 14.8 Transport/additional information:

#### Transport of dangerous goods by road (ADR):

UN number: 1604

Proper shipping name: Ethylenediamine

Details in the shipping document: UN1604, ETHYLENEDIAMINE, 8, II, (D and E)

Class: 8

Classification code(s): CF1

Packing group: II

Hazard label:



Excepted quantities (EQ): E2

Limited quantities (LQ): 1L

Transport category (TC): 2

Tunnel restriction code (TRC): Passage forbidden through tunnels of category D and E

Hazard identification number: 83





## SECTION 15: Regulatory information

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

#### General details:

German Water Hazard Class (WGK): WGK Class 1 - low hazard to waters.

EU Regulation (EG) nr. 1272/2008 (CLP) - Annex I

EU Regulation (EG) nr. 1907/2006 (REACH) - Annex XVII

EU Regulation (EU) nr. 453/2010 (REACH)

### 15.2 Chemical safety assessment: No data available.

## SECTION 16: Other information

This Safety Data Sheet (SDS) has been written in accordance with EU legislation.

The information in this SDS is based on our present knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It does not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. Users should always consult the most recent version of relevant regulations and any applicable local laws and regulations.

#### Relevant phrases:

H226: Flammable liquid and vapour.

H302: Harmful if swallowed.

H314: Causes severe skin burns and serious eye damage.

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

H317: May cause an allergic skin reaction.

#### Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

CAS: Chemical Abstracts Service (division of the American Chemical Society)

EINECS: European Inventory of Existing Commercial Chemical Substances

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

STOT: Specific Target Organ Toxicity

WGK: Wassergefährdungsklasse (German: Water Hazard Class)

Flam. Liq. 3: Flammable Liquid Category 3

Acute Tox. 4: Acute Toxicity Category 4

Skin Corr. 1B: Skin Corrosion Category 1B

Resp. Sens. 1: Respiratory Sensibilizer Category 1

Skin Sens. 1: Skin Sensibilizer Category 1

#### Sources:

Regulation (EC) nr. 1907/2006 of the European Parliament and of the Council of 18 December 2006, REACH

Regulation (EC) nr. 1272/2008 of the European Parliament and of the Council of 16 December 2008, CLP

GESTIS Substance Database

Globally Harmonized System, GHS

ADR2017