



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

#### 1.1 Product identifier:

**Trade name:** Ethylenediamine 1% ≤ C < 5%

**Article number:** 600935 (Identipack BV)

**CAS-number:** 107-15-3

**EINECS:** 203-468-6

**UFI:** Not applicable.

#### 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:

**Downstreamuser**

Identipack B.V.

Broekstraat 4

5721 CT Someren

Netherlands

Tel:(+31) (0)493 - 672277

Fax:(+31) (0)439 - 672268

E-mail : [info@identipack.com](mailto:info@identipack.com)

#### 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 8092566 - 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. 3: H311

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 classified and labelled according to the CLP regulation.

**Hazard pictogram:**



GHS02

GHS05

GHS06

GHS08

**Signal word:** Danger

**Hazard-determining components of labelling:** Ethylenediamine 1% ≤ C < 5% (EDA)

**Hazard statements:**

H226: Flammable liquid and vapour.

H311: Toxic in contact with skin.

H302: Harmful if swallowed.

H314: Causes severe skin burns.

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

H317: May cause an allergic skin reaction.



### Precautionary statements:

P210:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
P261:	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264:	Wash hands thoroughly after handling.
P271:	Use only outdoors or in a well-ventilated area.
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.
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.
P333+P313:	If skin irritation or rash occurs: Get medical advice/attention.
P342+P311:	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

### 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 substances:

#### Dangerous components:

CAS: 107-15-3  
EINECS: 203-468-6  
Index: 612-006-00-6



Ethylenediamine 1% ≤ C < 5% (EDA)  
Flam. Liq. 3, H226; Acute Tox. 3, H311;  
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 immediately any clothing soiled by the product and wash with plenty of water. The rescuer has to be equipped with individual protection. Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

**After inhalation:** Supply fresh air or and call for a doctor. In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:** If skin irritation continues, consult a doctor.

**After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing:** Drink plenty of water and provide fresh air. Call for a doctor immediately.

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

No further relevant information available.

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

No further relevant information available.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media:

**Suitable extinguishing agents:** CO<sub>2</sub> or alcohol resistant foam.

**Unsuitable extinguishing agents:** Water with full jet.

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

Can form explosive gas-air mixtures. Nitrogen oxides (NO<sub>x</sub>). In case of fire, carbon monoxide and carbon dioxide can be released. In the absence of oxygen: Ammonia (NH<sub>3</sub>).

#### 5.3 Advice for firefighters:

**Protective equipment:** Do not inhale gases in case of fire or combustion.

**Additional information:** Keep receptacles cool with water spray. Operate from a sheltered position.

### SECTION 6: Accidental release measures

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

Keep away any ignition source. Wear protective equipment. Keep unprotected persons away.

Use respiratory protective device against the effects of fumes. Ensure adequate ventilation.

#### 6.2 Environmental precautions:

Dilute with plenty of water after collecting the liquid. Do not allow to enter sewers/surface or ground water.

Inform respective authorities in case of seepage into water course or sewage system.

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

Collect the liquid with vacuum in a suitable container and absorb the remainder with a porous material (diatomite, acid binders, universal binders, etc). Use neutralising agent. Ensure adequate ventilation.

Dispose contaminated material as waste according to Section 13.

#### 6.4 Reference to other sections:

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling:

Ensure good ventilation/exhaustion at the workplace. Only handle and refill product in closed systems or under local exhaust. Keep ignition sources away - Do not smoke. Protect against electrostatic charges.

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

**Storage:**

**Requirements to be met by storerooms and receptacles:**

Store in cool place. Provide floor trough without outlet.

**Information about storage in one common storage facility:** Store away from oxidising agents.

**Further information about storage conditions:** Keep receptacle tightly sealed.

#### 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:**

TLV not established.

**DNELs:**

Inhalative      DNEL (workers-local effects acute)      24-60 mg/m<sup>3</sup> (fishes)

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

### 8.2 Exposure controls:

**Personal protective equipment:**

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed. Immediately remove all contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the skin.

**Respiratory protection:** In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

**Protection of hands:** The glove material has to be impermeable and resistant to the product/the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

**Material of gloves:** The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material:** The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Tightly sealed goggles.

## SECTION 9: Physical and chemical properties

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

**Appearance:**

<b>Form:</b>	Fluid.
<b>Colour:</b>	Colourless.
<b>Odour:</b>	Ammonia-like.
<b>Odour threshold:</b>	Not determined.

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**pH-value:** Not determined.

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**Change in condition:**

<b>Melting point/freezing point:</b>	8.5 °C.
<b>Initial boiling point and boiling range:</b>	117 °C
<b>Flash point:</b>	34 °C.

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<b>Flammability (solid, gas):</b>	Not applicable.
<b>Ignition temperature:</b>	385 °C.

<b>Decomposition temperature:</b>	Not determined.
<b>Auto-ignition temperature:</b>	Not determined.
<b>Explosive properties:</b>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
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<b>Vapour pressure at 20 °C:</b>	12 hPa
<b>Density at 20 °C:</b>	0.98 g/cm <sup>3</sup> .
<b>Relative density:</b>	Not determined.
<b>Verdampingssnelheid</b>	Not determined.
<b>Solubility in / Miscibility with:</b>	
<b>Water:</b>	0.05 g/L.
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<b>Partition coefficient: (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	Not determined.
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<b>9.2 Other information:</b>	No further relevant information available.

## SECTION 10: Stability and reactivity

**10.1 Reactivity:** See 10.3

**10.2 Chemical stability:**

**Thermal decomposition/conditions to be avoided:** No decomposition if used according to specifications.  
Conditions to avoid: Heat, flames and sparks.

**10.3 Possibility of hazardous reactions:** No dangerous reactions known.

**10.4 Conditions to avoid:** No further relevant information available.

**10.5 Incompatible materials:** No further relevant information available.

**10.6 Hazardous decomposition products:** Nitrogen Oxides (NOx). Carbon monoxide, carbon dioxide.

## SECTION 11: Toxicological information

**11.1 Information on toxicological effects:**

**Acute toxicity:** Harmful if swallowed or if inhaled. Toxic in contact with skin.

**LD/LC50 values relevant for classification:**

Oral - LD50 - 500 mg/kg (rat)

Dermal - LD50 - 730 mg/kg (rbt)

Inhalative - LC50/4h - 0.3 mg/L (mouse)

**Primary irritant effect:**

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

**Serious eye damage/irritation:** Causes serious eye damage.

**Ingestion:** Harmful if swallowed.

**Inhalation:**

Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**Germ cell mutagenicity:** No further relevant information available.

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

**Reproductive toxicity:** No further relevant information available.

**STOT-single exposure:** No further relevant information available.

**STOT-repeated exposure:** No further relevant information available.



### SECTION 12: Ecological information

#### 12.1 Toxicity:

**Aquatic toxicity:** No further relevant information available.

**12.2 Persistence and degradability:** No further relevant information available.

**12.3 Bioaccumulative potential:** No further relevant information available.

**12.4 Mobility in soil:** No further relevant information available.

**Ecotoxicological effects:**

**General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewer system.

#### 12.5 Results of PBT- and vPvB-assessment:

**PBT:** Not applicable.

**vPvB:** Not applicable.

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

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods:

**Recommendation:**

Must not be disposed together with household garbage. Do not allow product to reach sewer system.

Reutilise if possible or contact a waste processor for recycling or safe disposal.

**Waste disposal key:**

The European Union does not establish uniform rules for the disposal of chemical waste, which are special waste. Their treatment and elimination of the domestic legislation of each country. So in each case, you should contact the relevant authorities, or those companies legally authorized for elimination of waste.

**Uncleaned packaging:**

The containers and packing materials contaminated with dangerous substances or preparations, have the same treatment products.

**Recommended cleansing agents:**

Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

#### 14.1 UN-number:

**ADR, IMDG, IATA:** UN1604

#### 14.2 UN proper shipping name:

**ADR:** 1604 ETHYLENEDIAMINE

**IMDG, IATA:** ETHYLENEDIAMINE



**Class:** 8 (CF1) Corrosive substances.

Label: 8+3  
IMDG, IATA:



Class: 8 Corrosive substances.  
Label: 8/3

14.4 Packing group:  
ADR, IMDG, IATA: II

14.5 Environmental hazards:  
Marine pollutant: No

14.6 Special precautions for user: Warning: Corrosive substances.  
Danger code (Kemler): 83  
EMS-number: F-E, S-C  
Segregation groups: Alkalis

14.7 Transport in bulk according to Annex II of:  
MARPOL and the IBC-code: Not applicable.

**Transport/Additional information:**

ADR:  
Limited quantities (LQ): 1L  
Excepted quantities (EQ): Code E2  
Maximum net quantity per inner packaging: 30ml  
Maximum net quantity per outer packaging: 500 ml

Transport category: 2  
Tunnel restriction code: E

IMDG:  
Limited quantities (LQ): 1L  
Excepted quantities (EQ): Code: E2  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 500 ml

UN "Model Regulation": UN1604, ETHYLENEDIAMINE, 8 (3), II

### SECTION 15: Regulatory information

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

Directive 2012/18/EU:  
Named dangerous substances - ANNEX I: None of the ingredients are listed.  
REGULATION (EC) No 1907/2006 ANNEX XVII: Conditions of restriction: 3, 40

Information about limitation of use: -  
Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

15.2 Chemical safety assessment: A chemical safety assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

#### Relevant phrases:

H226:	Flammable liquid and vapour.
H311:	Toxic in contact with skin.
H302:	Harmful if swallowed.
H314:	Causes severe skin burns.
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)
IMDG:	International Maritime Code for Dangerous Goods
IATA:	International Air Transport Association
GHS:	Globally Harmonized System of Classification and Labelling of Chemicals
EINECS:	European Inventory of Existing Commercial Chemical Substances
CAS:	Chemical Abstracts Service (division of the American Chemical Society)
DNEL:	Derived No-Effect Level (REACH)
PNEC:	Predicted No-Effect Concentration (REACH)
LC50:	Lethal concentration, 50 percent
LD50:	Lethal dose, 50 percent
PBT:	Persistent, Bioaccumulative and Toxic
vPvB:	very Persistent and very Bioaccumulative
Skin Corr. 1B:	Skin corrosion/irritation - Category 1B
Flam. Liq. 3:	Flammable liquids - Category 3
Acute Tox. 3:	Acute toxicity - Category 3
Acute Tox. 4:	Acute toxicity - Category 4
Eye Dam. 1:	Serious eye damage/eye irritation - Category 1
Resp. Sens. 1:	Respiratory sensitisation - Category 1
Skin Sens. 1:	Skin sensitisation - Category 1

#### Sources:

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006, REACH, in the latest valid version.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008, CLP, in the latest valid version.

Globally Harmonized System, GHS

ADR2017