



Safety Data Sheet

According to Regulation (EC) 1907/2006



1869 Ethylenediamine

Identification of the substance/preparation and of the company or firm

1.1 Identification of the substance or preparation

Name:

Ethylenediamine

Synonym:

1,2-Diaminoethane, 1,2-Ethanediamine

REACH Registration Number: A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) N° 1907/2006, the annual tonnage does not require a registration, the registration is envisaged for a later registration deadline or it is a mixture.

1.2 Use of the substance/preparation:

For laboratory utilisation, analysis, research and fine chemistry.

1.3 Identification of the company or firm:

PANREAC QUIMICA S.L.U.

C/Garraf 2

Polígono Pla de la Bruguera

E-08211 Castellar del Vallès

(Barcelona) Spain

Tel. (+34) 937 489 400

e-mail: product.safety@panreac.com

1.4 Emergency telephone:

Single telephone number for emergency calls: 112 (EU)

Tel.: (+34) 937 489 499

Identification of dangers

Classification of the substance or the mixture.

Classification Regulation (CE) n° 1272/2008.

Flam. Liq. 3

Acute Tox. 4

Acute Tox. 4

Skin Corr. 1B

Resp. Sens 1

Skin Sens. 1

Hazard Pictograms



Signal word

Danger

Hazard statements

H226 Flammable liquid and vapour.

H312 Harmful in contact with skin.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

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/sparks/open flames/hot surfaces. No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting/.../ equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

Classification (67/548/CEE or 1999/45/CE).

R42/43

R34

C Corrosive

R21/22

R10

For the full text of the R-phrases mentioned in this section, see section 16.

Component Composition/Information

Name: Ethylenediamine

Formula: C₂H₈N₂ M.= 60,10 CAS [107-15-3]

EC number (EINECS): 203-468-6

EC index number: 612-006-00-6

First aid

4.1 General indications:

Never provide drink or induce vomiting in the event of loss of consciousness.

4.2 Inhaling:

Take the person out into the fresh air. In the event of suffocation, proceed to provide artificial respiration.

4.3 Contact with the skin:

Wash with plenty of water. Remove contaminated clothing. Take the product out with cotton wool soaked in polyethylene-glycol 400.

4.4 Eyes:

Wash with plenty of water (for at least 15 minutes), keeping eyelids open. Seek medical assistance.

4.5 Swallowing:

Drink lemon juice, vinegar or milk mixed with raw eggs. Subsequently, drink large amounts of water. Avoid vomiting (there is a risk of perforation). Seek immediate medical assistance.

Fire-fighting means

5.1 Suitable fire-extinguishing means:

Water. Carbon dioxide (CO₂). Foam. Dry powder.

5.2 Fire-fighting means which must NOT be used:

No specific data.

5.3 Special risks:

Combustible. Keep away from sources of ignition. May form explosive mixtures with the air. The fumes are heavier than air, so they may spread at floor level. In the event of fire, toxic fumes may form.

5.4 Protective equipment:

Suitable clothing and footwear.

Measures to be taken in the event of accidental spillage

6.1 Individual precautions:

Do not inhale the fumes.

6.2 Precautions for care of the environment:

Do not allow it to enter the drainage system. Avoid pollution of the soil, water supplies and drains.

6.3 Methods for collection/cleaning:

Collect up with absorbent materials (Panreac General Absorbent, Kieselguhr, etc.) or, if none available, dry sand or earth, and deposit in waste containers for subsequent elimination in accordance with current legislation. Clean any remains with plenty of water.

Handling and storage

7.1 Handling:

Avoid the formation of electrostatic charges. Handle under an extractor fan.

7.2 Storage:

Well sealed containers. Dry atmosphere. In a cool place. Protected from air.

Staff exposure/protection controls

8.1 Technical protective measures:

No special indications.

8.2 Exposure limit control:

TLV-TWA: 10 ppm - 25 mg/m³

VLA-ED: 10 ppm - 25 mg/m³ dermal resorption

8.3 Respiratory protection:

In the event of fumes forming/aerosols, use suitable respiratory protection. Filter A. Filter P.

8.4 Hand protection:

Use suitable gloves

8.5 Eye protection:

Use suitable goggles.

8.6 Individual hygiene measures:

Remove contaminated clothing. Use suitable work clothing. Wash hands and face before breaks and when the job is done. Do not inhale the substance.

8.7 Environmental exposure controls:

Fulfill the commitments under local environmental protection legislation.

Physical and chemical properties

Appearance: liquid

Colour: Colourless

Granulometry: N/A

Odour: Characteristic.

pH: 12 (250 g/l)

Melting point/freezing point: 8,5 °C

Initial boiling point and boiling range: 116,5 °C

Flash point: 34 °C

Flammability (solid, gas):

N/A

Upper/lower flammability or explosive limits: 16,6 %(V) / 2,7 %(V)

Vapour pressure: 12 hPa (20 °C)

Vapour density: N/A

Relative density: (20/4) 0,898

Solubility: Miscible with water

Partition coefficient: n-octanol/water:

N/A

Auto-ignition temperature: 385 °C

Decomposition temperature: N/A

Viscosity: N/A

Stability and reactivity

10.1 Conditions which should be avoided:

High temperatures.

10.2 Matter which should be avoided:

Acids. Air

10.3 Hazardous decomposition products:

No specific data.

10.4 Complementary information:

Hygroscopic.

Toxicological information

- **Acute toxicity:**

LD50 oral rat : 500 mg/kg

LD50 skn rbt : 730 mg/kg

TC L0 inh man : 200 ppm

LC L0 inh mus : 300 g/m³ 1h

LC L0 inh rat : 4000 ppm 8h

LD50 ipr mus : 200 mg/kg

- **Dangerous effects for health:**

If inhaled: Irritations to the mucosae coughing breathing difficulties sensitization Upon contact with the skin: burns sensitization Through contact with the eyes: burns sensitization allergic reaction Can cause hepatic problems kidney problems Other dangerous characteristics are not discarded. Take the usual precautions for handling chemical products.

Environmental information

12.1 Toxicity:

12.1.1 - EC50 test (mg/l):

Bacteria (Photobacterium phosphoreum) 20,4 mg/l

Classification:

Extr. toxic

12.1.2. - Receptor medium:

Risk for the water environment

Medium

Risk for the land environment

Medium

12.1.3. - Observations:

12.2 Persistence and Degradability :

12.2.1 - Test:

12.2.2. - Biotic degradation classification:

BOD5/COD

Biodegradability

12.2.3. - Abiotic degradation depending on pH:

12.2.4. - Observations:

Data not available.

12.3 Bioaccumulative potential:

12.3.1. - Test:

12.3.2. - Bioaccumulation:

Risk

12.3.3. - Observations:

12.4 Mobility in soil :

Data not available.

12.5 Assessment PBT and MPMB :

Data not available.

12.6 Other possible effects on the environment:

Do not allow it to enter soils or water channels.

Considerations regarding elimination

13.1 Substance or preparation:

In the European Union, there are no homogeneous standards established for elimination of chemical waste, which is waste of a special nature, and treatment and elimination of same is subject to the domestic legislation in each country.

In view of this, in each case, you should contact the competent authority or those companies legally authorized for elimination of waste.

2001/573/EC: Council Decision of 23 July 2001 amending Commission Decision 2000/532/EC as regards the list of wastes. Council Directive 91/156/EEC of 18 March 1991 amending Directive 75/442/EEC on waste.

13.2 Contaminated containers:

Contaminated containers and packaging of dangerous substances or preparations must be treated in the same manner as the actual products contained in them.

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste.

Information concerning transport

Overland (ADR):

Technical name: ETHYLENEDIAMINE

UN 1604 Class: 8 3 Packaging group: II (D/E)

By sea (IMDG):

Technical name: ETHYLENEDIAMINE

UN 1604 Class: 8 3 Packaging group: II

By air (ICAI-IATA):

Technical name: Ethylenediamine

UN 1604 Class: 8 3 Packaging group: II

Packaging instructions: CAO 855 PAX 851

Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Other information

Other precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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

P264 Wash...thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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

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

P285 In case of inadequate ventilation wear respiratory protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

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

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

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

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

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

P310 Immediately call a POISON CENTER or doctor/physician.

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

P321 Specific treatment (see on this label).

P322 Specific measures (see on this label).

P330 Rinse mouth.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P338 Remove contact lenses, if present and easy to do. Continue rinsing.

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

P363 Wash contaminated clothing before reuse.

P370+P378 In case of fire: Use for extinction.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container according to Directive 94/62/CE or 2008/98/CE.

Labelling (65/548/CEE or 1999/45/CE)

R-phrase(s):	R42/43 May cause sensitisation by inhalation and skin contact. R34 Causes burns. R21/22 Harmful in contact with skin and if swallowed. R10 Flammable.
S-phrase(s):	S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S23c Do not breathe vapour.

Review number and date: 4 15.09.2011

Date published: 15.09.2011

In respect of the previous review, changes have been made to the following sections: 15

The information included in this Safety Data Sheet is based on our most up-to-date knowledge, and is solely intended to inform regarding aspects of safety; the properties and characteristics indicated herein are not guaranteed.