

**Safety data sheet**  
according to UK REACH

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Printing date 08.07.2025

Revision: 08.07.2025

Version number 9.04 (replaces version 9.03)

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

- **1.1 Product identifier**
- **Trade name:** ethylene glycol
- **Article number:** 1316
- **CAS Number:**  
107-21-1
- **EC number:**  
203-473-3
- **Index number:**  
603-027-00-1
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
PANREAC QUIMICA S.L.U.  
C/Garraf 2  
Polígono Pla de la Bruguera  
E-08211 Castellar del Vallès (Barcelona)  

Tel. (+34) 937 489 400  
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- **Further information obtainable from:** email: [product.safety@panreac.com](mailto:product.safety@panreac.com)
- **1.4 Emergency telephone number:**  
Single telephone number for emergency calls: 112 (EU)  
Tel.: (+34) 937 489 499

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
Acute Tox. 4 H302 Harmful if swallowed.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms**



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- **Signal word** Warning
- **Hazard statements**  
H302 Harmful if swallowed.
- **Precautionary statements**  
P264 Wash thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
P330 Rinse mouth.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description**  
107-21-1 ethanediol
- **Identification number(s)**
- **EC number:** 203-473-3
- **Index number:** 603-027-00-1

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.  
Involve doctor immediately.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Call a doctor immediately.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
make victim drink water (maximum of 2 drinking glasses)  
Call 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>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Carbon monoxide and carbon dioxide  
Combustible.

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- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
Contain escaping vapours with water.

## SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Avoid substance contact.  
Do not inhale steams/aerosols.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to section 13.  
Ensure adequate ventilation.  
Clean up affected area.
- **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.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Open receptacle only under localised extractor facilities.  
Store under lock and key and with access restricted to technical experts or their assistants only.  
Keep container sealed.
- **Recommended storage temperature:** Room Temperature
- **Storage class:** 10
- **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:**

### 107-21-1 ethanediol

|     |                                                                                                                                            |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------|
| WEL | Short-term value: 104** mg/m <sup>3</sup> , 40** ppm<br>Long-term value: 10* 52** mg/m <sup>3</sup> , 20** ppm<br>Sk *particulate **vapour |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------|

- **Additional information:** The lists valid during the making were used as basis.

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- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.
- **Respiratory protection:**  
Filter ABEK  
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.  
Use suitable respiratory protective device only when aerosol or mist is formed.
- **Hand protection**  
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.
- **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.
- **For the permanent contact gloves made of the following materials are suitable:**  
Nitrile rubber, NBR  
Recommended thickness of the material:  $\geq 0.11$  mm  
Value for the permeation: Level  $\geq 480$  min
- **As protection from splashes gloves made of the following materials are suitable:**  
Nitrile rubber, NBR  
Recommended thickness of the material:  $\geq 0.11$  mm  
Value for the permeation: Level  $\geq 480$  min
- **Eye/face protection** Safety glasses
- **Body protection:** Use protective suit.

## SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Liquid
- **Colour:** Colourless
- **Odour:** Odourless
- **Odour threshold:** Not determined.
- **Melting point/freezing point:** -12 °C
- **Boiling point or initial boiling point and boiling range** 198 °C
- **Flammability** Not applicable.
- **Lower and upper explosion limit**
- **Lower:** 3.2 Vol %
- **Upper:** 15.3 Vol %
- **Flash point:** 111 °C
- **Auto-ignition temperature:** 410 °C
- **Decomposition temperature:** Not determined.
- **pH** Not determined.

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|                                                                                        |                                               |
|----------------------------------------------------------------------------------------|-----------------------------------------------|
| · <b>Viscosity:</b>                                                                    |                                               |
| · <b>Kinematic viscosity</b>                                                           | Not determined.                               |
| · <b>Dynamic at 21 °C:</b>                                                             | 16 mPas                                       |
| · <b>Solubility</b>                                                                    |                                               |
| · <b>water:</b>                                                                        | Fully miscible.                               |
| · <b>Partition coefficient n-octanol/water (log value)</b>                             | Not determined.                               |
| · <b>Vapour pressure at 20 °C:</b>                                                     | 0.06 hPa                                      |
| · <b>Density and/or relative density</b>                                               |                                               |
| · <b>Density at 20 °C:</b>                                                             | 1.11 g/cm <sup>3</sup>                        |
| · <b>Relative density</b>                                                              | Not determined.                               |
| · <b>Vapour density</b>                                                                | Not determined.                               |
| · <b>9.2 Other information</b>                                                         |                                               |
| · <b>Appearance:</b>                                                                   |                                               |
| · <b>Form:</b>                                                                         | Fluid                                         |
| · <b>Important information on protection of health and environment, and on safety.</b> |                                               |
| · <b>Ignition temperature:</b>                                                         | Not determined.                               |
| · <b>Explosive properties:</b>                                                         | Product does not present an explosion hazard. |
| · <b>Molecular weight</b>                                                              | 62.07 g/mol                                   |
| · <b>Change in condition</b>                                                           |                                               |
| · <b>Evaporation rate</b>                                                              | Not determined.                               |
| · <b>Information with regard to physical hazard classes</b>                            |                                               |
| · <b>Explosives</b>                                                                    | Void                                          |
| · <b>Flammable gases</b>                                                               | Void                                          |
| · <b>Aerosols</b>                                                                      | Void                                          |
| · <b>Oxidising gases</b>                                                               | Void                                          |
| · <b>Gases under pressure</b>                                                          | Void                                          |
| · <b>Flammable liquids</b>                                                             | Void                                          |
| · <b>Flammable solids</b>                                                              | Void                                          |
| · <b>Self-reactive substances and mixtures</b>                                         | Void                                          |
| · <b>Pyrophoric liquids</b>                                                            | Void                                          |
| · <b>Pyrophoric solids</b>                                                             | Void                                          |
| · <b>Self-heating substances and mixtures</b>                                          | Void                                          |
| · <b>Substances and mixtures, which emit flammable gases in contact with water</b>     | Void                                          |
| · <b>Oxidising liquids</b>                                                             | Void                                          |
| · <b>Oxidising solids</b>                                                              | Void                                          |
| · <b>Organic peroxides</b>                                                             | Void                                          |
| · <b>Corrosive to metals</b>                                                           | Void                                          |
| · <b>Desensitised explosives</b>                                                       | Void                                          |

## SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
Warming. A range from approx. 15 Kelvin below the flash point is to be rated as critical.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.

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- **10.5 Incompatible materials:**  
Varios plastics  
oxidizing agent
- **10.6 Hazardous decomposition products:** In the event of fire: See chapter 5
- **Additional information:** hygroscopic

## SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Harmful if swallowed.
- **LD/LC50 values relevant for classification:**  
Quantitative data on the toxicological effect of this product are not available.

| Components | Type | Value                | Species |
|------------|------|----------------------|---------|
| Oral       | LD50 | 4,700 mg/kg (rat)    |         |
| Dermal     | LD50 | 9,530 mg/kg (rabbit) |         |

- **After inhalation:** No irritant effect.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

## SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.

| Type of test | Effective concentration     | Method | Assessment |
|--------------|-----------------------------|--------|------------|
| EC50         | 650 mg/l (Bakterien)        |        |            |
|              | 10,000 mg/l (daphnia magna) |        |            |
|              | 5,000 mg/l (fish)           |        |            |

- **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.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**  
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**  
Do not allow product to reach ground water, water course or sewage system.  
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

## SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Chemicals must be disposed of in compliance with the respective national regulations.  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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- **Uncleaned packaging:**
- **Recommendation:**  
Disposal must be made according to official regulations.  
Packagings that may not be cleansed are to be disposed of in the same manner as the product.

## SECTION 14: Transport information

- |                                                                                             |                                                      |
|---------------------------------------------------------------------------------------------|------------------------------------------------------|
| · <b>14.1 UN number or ID number</b><br>· <b>ADR, ADN, IMDG, IATA</b>                       | Void                                                 |
| · <b>14.2 UN proper shipping name</b><br>· <b>ADR, ADN, IMDG, IATA</b>                      | Void                                                 |
| · <b>14.3 Transport hazard class(es)</b><br>· <b>ADR, ADN, IMDG, IATA</b><br>· <b>Class</b> | Void                                                 |
| · <b>14.4 Packing group</b><br>· <b>ADR, IMDG, IATA</b>                                     | Void                                                 |
| · <b>14.5 Environmental hazards:</b>                                                        | Not applicable.                                      |
| · <b>14.6 Special precautions for user</b>                                                  | Not applicable.                                      |
| · <b>14.7 Maritime transport in bulk according to IMO instruments</b>                       | Not applicable.                                      |
| · <b>Transport/Additional information:</b>                                                  | Not dangerous according to the above specifications. |
| · <b>UN "Model Regulation":</b>                                                             | Void                                                 |

## SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**
- **Regulated explosives precursors** Substance is not listed.
- **Regulated poisons** Substance is not listed.
- **Reportable explosives precursors** Substance is not listed.
- **Reportable poisons** Substance is not listed.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **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.

- **Abbreviations and acronyms:**  
ADR: Accord relatif au transport international 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 Harmonised 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)

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LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

· **\* Data compared to the previous version altered.**

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