

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 07.06.2021

Version number 5.0

Revision: 02.06.2021

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

- **1.1 Product identifier**
- **Trade name:** Ethylene glycol, for analysis, ExpertQ®, Reag. Ph Eur
- **Article number:** ET0166
- **CAS Number:**
107-21-1
- **EC number:**
203-473-3
- **Index number:**
603-027-00-1
- **Registration number** 01-2119456816-28-XXXX
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Process category**
PROC5 Mixing or blending in batch processes
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC15 Use as laboratory reagent
- **Application of the substance / the preparation:** Laboratory reagent
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Scharlab, S.L.
C/Gato Pérez, 33. Pol.Ind. Mas d'en Cisa
08181 Sentmenat (Barcelona) SPAIN
Tel: (+34) 93 745 64 00 - FAX: (+34) 93 715 27 65
email: scharlab@scharlab.com
Internet Web Site: www.scharlab.com
- **Regional representation:**
Scharlab, S.L.
C/Gato Pérez, 33. Pol.Ind. Mas d'en Cisa
08181 Sentmenat (Barcelona) SPAIN
Tel: (+34) 93 745 64 00 - FAX: (+34) 93 715 27 65
email: scharlab@scharlab.com
Internet Web Site: www.scharlab.com
- **Further information obtainable from:** technical department
- **1.4 Emergency telephone number:**
Please contact the regional Scharlab distributor/dealer in your country
During normal opening times: Scharlab, S.L. (+34) 93 715 18 11

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS07

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 CLP regulation.

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 07.06.2021

Version number 5.0

Revision: 02.06.2021

Trade name: Ethylene glycol, for analysis, ExpertQ®, Reag. Ph Eur

(Contd. of page 1)

Hazard pictograms

GHS07

- **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 Chemical characterisation: 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.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** 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:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture**
No further relevant information available.

(Contd. on page 3)

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 07.06.2021

Version number 5.0

Revision: 02.06.2021

Trade name: Ethylene glycol, for analysis, ExpertQ®, Reag. Ph Eur

(Contd. of page 2)

- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:**
Dilute with plenty of water.
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 item 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** No special precautions are necessary if used correctly.
- **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:** None.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**

107-21-1 ethanediol

WEL Short-term value: 104** mg/m³, 40** ppm
Long-term value: 10* 52** mg/m³, 20** ppm
Sk *particulate **vapour

- **DNELs**
DNEL worker, cronic. Systematic effects: Dermic - 106 mg/kg body weight
DNEL worker, cronic. Local effects: Inhalative - 35 mg/m³
DNEL consumer, prolonged. Systematic effects: Dermic - 53 mg/kg body weight
DNEL consumer, prolonged. Local effects: Inhalative - 7 mg/m³
- **PNECs**
PNEC (Fresh water): 10 mg/L
PNEC (Sea water): 1 mg/L
PNEC (Periodic water release): 10 mg/L
PNEC (Freshwater sediments): 20.9 mg/kg
PNEC (Soil): 1.53 mg/kg
PNEC (Residual water depuration system): 199.5 mg/kg
- **Additional information:** The lists valid during the making were used as basis.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 07.06.2021

Version number 5.0

Revision: 02.06.2021

Trade name: Ethylene glycol, for analysis, ExpertQ®, Reag. Ph Eur

(Contd. of page 3)

- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
- **Respiratory protection:** Not required.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
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.
- **Eye protection:** Goggles recommended during refilling

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**
 - Form:** Fluid
 - Colour:** Colourless
 - Odour:** Sweetish
 - Odour threshold:** Not determined.
 - pH-value:** Not determined.
- **Change in condition**
 - Melting point/freezing point:** -12.4 °C
 - Initial boiling point and boiling range:** 197 °C
- **Flash point:** 111 °C
- **Flammability (solid, gas):** Not applicable.
- **Ignition temperature:** 410 °C
- **Decomposition temperature:** Not determined.
- **Auto-ignition temperature:** Not determined.
- **Explosive properties:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Lower:** 3.2 Vol %
 - Upper:** 53 Vol %
- **Vapour pressure at 20 °C:** 0.08 hPa
- **Density at 20 °C:** 1.11 g/cm³
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 07.06.2021

Version number 5.0

Revision: 02.06.2021

Trade name: Ethylene glycol, for analysis, ExpertQ®, Reag. Ph Eur

(Contd. of page 4)

- **Solubility in / Miscibility with water at 20 °C:** 1 g/l
- **Partition coefficient: n-octanol/water:** Not determined.
- **Viscosity:**
 - Dynamic at 20 °C:** 21 mPas
 - Kinematic:** Not determined.
- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **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:** No dangerous decomposition products known.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Harmful if swallowed.
- **LD/LC50 values relevant for classification:**

 - Oral LD50 5840 mg/kg (rat)
 - Dermal LD50 9530 mg/kg (rabbit)
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

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.
 - **Additional ecological information:**
 - **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water
- (Contd. on page 6)

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 07.06.2021

Version number 5.0

Revision: 02.06.2021

Trade name: Ethylene glycol, for analysis, ExpertQ®, Reag. Ph Eur

(Contd. of page 5)

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage 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 sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR, ADN, IMDG, IATA** Void
- **14.2 UN proper shipping name**
- **ADR, ADN, IMDG, IATA** Void
- **14.3 Transport hazard class(es)**
- **ADR, ADN, IMDG, IATA**
- **Class** Void
- **14.4 Packing group**
- **ADR, IMDG, IATA** Void
- **14.5 Environmental hazards:**
- **Marine pollutant:** No
- **14.6 Special precautions for user** Not applicable.
- **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.
- **UN "Model Regulation":** Void

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 -**
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
Substance is not listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has 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.

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 07.06.2021

Version number 5.0

Revision: 02.06.2021

Trade name: Ethylene glycol, for analysis, ExpertQ®, Reag. Ph Eur

(Contd. of page 6)

• Classification according to Regulation (EC) No 1272/2008

The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

• Department issuing SDS: product safety department**• Contact:** msds@scharlab.com**• Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

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)

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

Acute Tox. 4: Acute toxicity – Category 4

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 07.06.2021

Version number 5.0

Revision: 02.06.2021

Trade name: Ethylene glycol, for analysis, ExpertQ®, Reag. Ph Eur

(Contd. of page 7)

Annex: Exposure scenario 1

- **1 - Short title of the exposure scenario** Industrial use
- **Sector of Use**
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
- **Process category**
PROC5 Mixing or blending in batch processes
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC15 Use as laboratory reagent
- **Environmental release category** ERC6a Use of intermediate
- **Description of the activities / processes covered in the Exposure Scenario**
See section 1 of the annex to the Safety Data Sheet.
- **2 - Conditions of use**
- **Duration and frequency**
8hrs (full working shift).
Emission days (days/year): 300
- **Physical parameters**
- **Physical state** Fluid
- **Concentration of the substance in the mixture** Raw material.
- **Used amount per time or activity** 50000 kg per day
- **Other operational conditions**
- **Other operational conditions affecting environmental exposure**
Source: ESVOC SpERC 2
Fraction released to air from process (initial release previous to MGR): 2.0E-05
Fraction released to residual water from process (initial release previous to MGR): 1.0E-02
Fraction released to ground from process (initial release previous to MGR): 1.0E-03
- **Other operational conditions affecting worker exposure**
Assumes use at not more than 20 °C above ambient temperature, unless stated differently.
Indoor application.
- **Other operational conditions affecting consumer exposure during the use of the product**
Not applicable.
- **Risk management measures**
- **Worker protection**
- **Organisational protective measures**
Ensure good ventilation. This can be achieved by using a local exhaustion or general exhaust system. If these measures are insufficient to keep the solvent vapour concentration below the workplace limit, wear an adequate respiratory protective device.
The appropriate type of chemical protective glove has to be selected specifically, depending on the concentration and quantity of hazardous substances in the workplace.
For special applications, it is recommended to verify the chemical resistance of the above stated protective gloves with the manufacturer.
No special measures required.
- **Technical protective measures**
Ensure that suitable extractors are available on processing machines
Carry out filling operations only at sites with extractors available.
- **Personal protective measures**
Wear suitable protective gloves and protective goggles /face protection during work.
Check protective gloves prior to each use for their proper condition.
Do not inhale gases / fumes / aerosols.
- **Measures for consumer protection** Ensure adequate labelling.
- **Environmental protection measures**
- **Air** No special measures required.

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.06.2021

Version number 5.0

Revision: 02.06.2021

Trade name: Ethylene glycol, for analysis, ExpertQ®, Reag. Ph Eur

(Contd. of page 8)

- **Water**

The product should not be released into water without pretreatment. An on-site wastewater treatment is recommended. The typical site treatment technology of wastewater achieves removal efficiency (%): (87)

- **Soil** No special measures required.

- **Notes** In case of unintended release of the product: See section 6 of the Safety Data Sheet.

- **Disposal measures**

Disposal must be made according to official regulations.
Ensure that waste is collected and contained.

- **Disposal procedures**

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

- **Waste type** Partially emptied and uncleaned packaging

- **3 - Exposure estimation**

To estimate exposures in the workplace has been used ECETOC TRA tool unless otherwise indicated.

- **Worker (oral)**

No significant oral exposure

Detailed information on the exposure estimation can be found at <http://www.ecetoc.org/tra>.

- **Worker (dermal)**

No significant dermal exposure

Detailed information on the exposure estimation can be found at <http://www.ecetoc.org/tra>.

- **Worker (inhalation)**

No significant inhalative exposure

Detailed information on the exposure estimation can be found at <http://www.ecetoc.org/tra>.

- **Environment**

Water: No exposure

Soil: No exposure

Purification plant: No exposure

Humans via environment: No exposure

- **Consumer** Not relevant for this Exposure Scenario.

- **4 - Guidance for downstream users**

Whether the downstream user acts within the scope of the Exposure Scenario can be verified based on the information in sections 1 to 8.

Whether the downstream user uses the substance / the mixture within the scope of the Exposure Scenario can be determined by means of a technical assessment.

For the risk assessment, the tools recommended by ECHA can be used.

(Contd. on page 10)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 07.06.2021

Version number 5.0

Revision: 02.06.2021

Trade name: Ethylene glycol, for analysis, ExpertQ®, Reag. Ph Eur

(Contd. of page 9)

Annex: Exposure scenario 2

- **1 - Short title of the exposure scenario** Laboratory use
- **Sector of Use**
 - SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
 - SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- **Process category** PROC15 Use as laboratory reagent
- **Environmental release category**
 - ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
- **Description of the activities / processes covered in the Exposure Scenario**

See section 1 of the annex to the Safety Data Sheet.
- **2 - Conditions of use**
- **Duration and frequency**

8hrs (full working shift).
Emission days (days/year): 365
- **Physical parameters**
- **Physical state** Fluid
- **Concentration of the substance in the mixture** Raw material.
- **Used amount per time or activity** 5479 kg per day
- **Other operational conditions**
- **Other operational conditions affecting environmental exposure**

Source: ESVOC SpERC 39
Fraction released to air from process (initial release previous to MGR): 5.00E-01
Fraction released to residual water from process (initial release previous to MGR): 5.00E-01
Fraction released to ground from process (initial release previous to MGR): 0
- **Other operational conditions affecting worker exposure**

Assumes use at not more than 20 °C above ambient temperature, unless stated differently.
Indoor application.
- **Risk management measures**
- **Worker protection**
- **Personal protective measures**

Safety glasses
Wear suitable protective gloves and protective goggles /face protection during work.
Check protective gloves prior to each use for their proper condition.
Do not inhale gases / fumes / aerosols.
- **Measures for consumer protection** Ensure adequate labelling.
- **Environmental protection measures**
- **Air** No special measures required.
- **Water**

The product should not be released into water without pretreatment. An on-site wastewater treatment is recommended. The typical site treatment technology of wastewater achieves removal efficiency (%): (87)
- **Soil** No special measures required.
- **Notes** In case of unintended release of the product: See section 6 of the Safety Data Sheet.
- **Disposal measures**

Disposal must be made according to official regulations.
Ensure that waste is collected and contained.
- **Disposal procedures**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Waste type** Partially emptied and uncleaned packaging
- **3 - Exposure estimation**

To estimate exposures in the workplace has been used ECETOC TRA tool unless otherwise indicated.

(Contd. on page 11)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 07.06.2021

Version number 5.0

Revision: 02.06.2021

Trade name: Ethylene glycol, for analysis, ExpertQ®, Reag. Ph Eur

(Contd. of page 10)

• Worker (oral)

No significant oral exposure

Detailed information on the exposure estimation can be found at <http://www.ecetoc.org/tra>.**• Worker (dermal)**

No significant dermal exposure

Detailed information on the exposure estimation can be found at <http://www.ecetoc.org/tra>.**• Worker (inhalation)**

No significant inhalative exposure

Detailed information on the exposure estimation can be found at <http://www.ecetoc.org/tra>.**• Environment**

Water: No exposure

Soil: No exposure

Purification plant: No exposure

Humans via environment: No exposure

• Consumer Not relevant for this Exposure Scenario.**• 4 - Guidance for downstream users**

Whether the downstream user acts within the scope of the Exposure Scenario can be verified based on the information in sections 1 to 8.

Whether the downstream user uses the substance / the mixture within the scope of the Exposure Scenario can be determined by means of a technical assessment.

For the risk assessment, the tools recommended by ECHA can be used.