

# SAFETY DATA SHEET

## POLYETHYLENE GLYCOL 600

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830

Date of issue : 2022-11-29  
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Version : 1

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

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#### 1.1. Product identifier

**Product name** : Polyethylene Glycol 600  
**EINECS number** : 203-473-3  
**CAS number** : 25322-68-3  
**INCI Name** : Not available/not applicable  
**REACH Registration number** : The substance is not subject to registration under Regulation (EC) No. 1907/2006 [REACH].  
**Other means of identification** : PEG 600; Carbowax; Polyglycol  
**Chemical formula** :  $C_{2n+2}H_{4n+6}O_{n+2}$

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

**Typical applications** : Component for pharmaceutical and cosmetic preparations.  
Component for synthetic lubricants, cutting oils, hydraulic fluids and polishes.  
Used in the manufacture of synthetic resins, plasticisers and adhesives.  
Starting material for preparation of polyethylene glycol esters.  
Used in paper, rubber, textile, printing and metal industries.

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

**Name** : GLI-THERM Sp. z o.o.  
**Address** : st. Rozwojowa 11, 44-338 Jastrzębie-Zdrój Poland  
**Regon** : 242850136  
**NIP/Tax No** : 6423178990  
**Telephone** : +48 733 525 533  
**E-mail** : [sandra.stachowicz@gli-therm.eu](mailto:sandra.stachowicz@gli-therm.eu)  
**Website address** : [www.gli-therm.eu](http://www.gli-therm.eu)

#### 1.4. Emergency telephone number

##### National advisory body/Poison Center:

Ireland : National Poisons Information Centre  
Emergency number:  
+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166  
(public, 8am - 10pm, 7/7)

United Kingdom : National Poisons Information Service (Newcastle Centre)  
Emergency number:  
0844 892 0111 (UK only, 24/7, healthcare professionals only)

Poland	:	Szpital Praski p.w. Przemienienia Pańskiego Sp. z o.o. Emergency number: +48 22 619 66 54 +48 22 619 08 97
Germany	:	Vergiftungs-Informationen-Zentrale Freiburg Emergency number: +49 (0) 761 19240
24 Hour Emergency Telephone	:	+(44)-8708200418 CHEMTREC
<b>Supplier</b>		
Telephone number	:	+48 733 525 533

## SECTION 2: Hazards identification

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### 2.1. Classification of the substance or mixture

#### **Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Not classified according to 1272/2008.

Not classified according to 67/548/EEC.

### 2.2. Label elements

<b>Hazard pictograms</b>	:	Not applicable
<b>Signal word</b>	:	Not applicable
<b>Hazard statements</b>	:	Not applicable
<b>Precautionary statements</b>		
<b>Prevention</b>	:	Not applicable
<b>Response</b>	:	Not applicable
<b>Storage</b>	:	Not applicable
<b>Disposal</b>	:	Not applicable

### 2.3. Other hazards

<b>Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII</b>	:	Not applicable
<b>Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII</b>	:	Not applicable
<b>Other hazards which do not result in classification</b>	:	Eye contact may cause slight irritation. The estimated fatal dose (LD50) reduces as molecular weight increases (LD50/ in rat/ for PEG 200 = 28000-36000 mg/kg; PEG 1000 > 7000 mg/kg). Continuous ingestion in animals has caused some toxic effects. Case of toxicity may cause agglutination in cellular elements.

## SECTION 3: Composition/information on ingredients

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### 3.1. Substance

Mono-constituent substance

Substance	Identifiers	%	Classification Regulation (EC) No. 1272/2008 [CLP/GHS]	Type
Polyethylene Glycol 600	EINECS: 203-473-3 CAS: 25322-68-3 REACH: Not available/not applicable	> 99.5	Polyethylene Glycol 600	[A]
Water	EINECS: 231-791-2	<0.5		[B]

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type:

[A] Constituent

[B] Impurity

[C] Stabilizing additive

Occupational exposure limits, if available, are listed in Section 8.

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

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### 4.1 Description of first aid measures

- Eye contact** : In case of contact, flush eyes with plenty of water for at least 15 minutes. Get medical advice if irritation develops.
- Inhalation** : No adverse health effects expected from inhalation (May be a mechanical irritant).
- Skin contact** : In case of contact, flush skin immediately with plenty of soap and water for at least 15 minutes. Remove contaminated clothing or shoes. Wash clothing before reuse. Get medical attention if irritation develops or persists.
- Ingestion** : Do not induce vomiting. Obtain medical attention immediately.

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

- Potential acute health effects** : Not considered an health hazard, under normal use conditions.
- Over-exposure signs/symptoms** : Not considered an health hazard, under normal use conditions.

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

- Notes to physician** : Treat according to symptoms.
- Specific treatments** : Specific antidote not known.

## SECTION 5: Firefighting measures

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### 5.1. Extinguishing media

**Suitable extinguishing media** : Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. Alcohol-resistant foam may be used for larger fires.

**Unsuitable extinguishing media** : Do not use water in a jet

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

**Hazards from the substance or mixture** : Not classified as flammable but may burn, because of its flash point.

### 5.3 Advice for firefighters

**Special precautions for fire-fighters** : Follow standard procedures for chemical fires

**Special protective equipment for fire-fighters** : Use standard procedures for extinguishing chemicals

## SECTION 6: Accidental release measures

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

**For non-emergency personnel** : Wear monogoggles, PVC gloves (gauntlet type), disposable one-piece coated overall without integral hood, safety boots - rubber, knee length.

**For emergency responders** : Comply with relevant local regulations

### 6.2. Environmental precautions

In case of liquid spills: absorb with vermiculite, dry sand, earth or similar material and place in a closed container. If the spill flow into a current, it could be necessary a cutting back or aeration treatment. Dispose of collected material in accordance with local regulations.

### 6.3. Methods and materials for containment and cleaning up

Small spillage: Flush contaminated area with plenty of water.

Large spillage: Prevent from spreading by making a barrier with sand, earth or other containment material. Transfer to a recovery tank. Otherwise treat as for small spillage.

Dispose of collected material in accordance with local regulations.

### 6.4. Reference to other sections

See chapter 7 for safe handling information.

For information on personal protective equipment, see section 8.

See section 13 for disposal information

## SECTION 7: Handling and storage

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The information in this section contains generic advice and guidance.

### 7.1. Precautions for safe handling

**HANDLING** : Work in a ventilated area. Artificial ventilation may be necessary. Protect against physical damage and wear appropriate personal protective equipment as specified in Section 6. In case of toxic vapours inhalation risks use respiratory mask with filtering cartridge suitable for organic vapours and NPF20 filter (only for gases).

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

**Requirements for storage rooms and tanks** : The product is hygroscopic. Container should be stored tightly closed in a dry place.

### 7.3. Specific end use(s)

**Recommendations** : Not available.

**Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

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The information in this section contains generic advice and guidance.

### 8.1. Control parameters

**Occupational exposure limits** : Threshold limit values (VLA): Not specified

**DNEL (Derived No Effect Level) / DMEL (Derived Minimal Effect Level) for workers:** Not applicable  
**PNEC (Predicted No Effect Concentration):** Not applicable

### 8.2. Exposure controls

Individual protection measures

**Hygiene measures** : Always take caution in handling and hygiene for avoiding ingestion.

**Eye/face protection** : If necessary, use appropriate protection for eyes.

**Hand protection** : Avoid prolonged and repeated contact with skin.

**Body protection** : Avoid prolonged or repeated contact. Standard issue work clothes, safety shoes or boots - chemical resistant.

**Other skin protection** : No specified measures.

**Respiratory protection** : No specified measures.

**Environmental exposure controls** : No specified measures.

Permissible exposure limit expressed as a time-weighted average, the concentration of a substance to which most workers can be exposed without adverse effect averaged over a normal 8-h workday or a 40-h workweek

## SECTION 9: Physical and chemical properties

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

Physical state	:	Pale, clear, non-volatile liquid at 20°C
Color	:	Scale Pt-Co Maximum 15 Hazen (Aqueous solution at 25% weight/volume)
Odor	:	Odourless
Odor threshold	:	-
pH	:	4.0 – 7.0 (Aqueous solution at 5%/ weight/ volume)
Acidity	:	As acetic: Max. 0.03% mass
Hygroscopicity	:	40 (at 23°C and relative humidity than 50%) (Glycerine=100)
Melting point/freezing point	:	22°C (by capillarity)
Flash point	:	-
Evaporation rate	:	-
Flammability	:	Flash point: 254°C (ASTM D92, COC)
Upper/lower flammability or explosive limits	:	-
Vapor pressure	:	1.3 x 10 <sup>-8</sup> mbar at 20°C
Vapor density	:	-
Density	:	1.127 kg/l at 20°C
Relative density	:	-
Solubility(ies)	:	In other solvents: Alcohols, glycols, cetone, and aromatic hydrocarbons.
Solubility in water at room temperature (g/l)	:	In water: Miscible
Partition coefficient: n-octanol/water	:	-
Auto-ignition temperature	:	320°C (dust)
Decomposition temperature	:	-
Specific heat	:	0.49 cal/g°C
Viscosity	:	9.8-10.8 mm <sup>2</sup> /s at 100°C (ASTM D445)

### 9.2. Other information

Explosive properties	:	Explosive limits in air 60 g/m <sup>3</sup>
Oxidizing properties	:	-
Additional information	:	-

## SECTION 10: Stability and reactivity

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### 10.1. Reactivity

Reacts exothermically with hydroxyl groups

### 10.2 Chemical stability

Oxidation/ Reduction: The product gets dark and decomposes at high temperatures.

### 10.3. Possibility of hazardous reactions

See section 10.1.

#### 10.4. Conditions to avoid

No further relevant information available.

#### 10.5. Incompatible materials

Incompatible with semisynthetic resins, some polyvinyl resins, carboxymethylcellulose, beeswax, paraffin 135/140, casein gelatine, castor oil, mineral oil and chlorinated rubber.

#### 10.6 Hazardous decomposition products

Hazardous decomposition products are not known.

## SECTION 11: Toxicological information

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### 11.1. Information on toxicological effects

<b>Basis for assessment</b>	:	Information given is based on human and animal test data.
<b>Acute toxicity Oral</b>	:	Practically non toxic
<b>Acute toxicity Inhalation</b>	:	Expected to be non toxic, because of its low vapour pressure.
<b>Skin corrosion/irritation</b>	:	Is not expected to cause adverse effects on the skin.
<b>Serious eye damage/eye irritation</b>	:	Might be slight irritant.
<b>Germ cell mutagenicity</b>	:	Not considered to be a mutagenic hazard.
<b>Carcinogenic</b>	:	Not considered to be a carcinogen hazard.
<b>Human effects</b>	:	Not specified special measures. Polyethylene Glycol is not considered a toxic product. In animals, the estimated fatal dose (LD50) reduce as molecular weight increases. In case of acute toxicity may cause agglutination in cellular elements.

## SECTION 12: Ecological information

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### 12.1. Toxicity

<b>Acute toxicity – fish</b>	:	Toxicity is considered negligible to the environment. Respecting to the aquatic environment, an indirect risk is posed because of its fast biodegradability can reduce the oxygen concentration in water.
<b>Acute toxicity – invertebrates</b>	:	Toxicity is considered negligible to the environment.
<b>Acute toxicity – bacteria</b>	:	Toxicity is considered negligible to the environment.
<b>Acute toxicity – algae organisms</b>	:	Toxicity is considered negligible to the environment.
<b>Basis for assessment</b>	:	Toxicity is considered negligible to the environment.

### 12.2 Persistence and degradability

Readily biodegradable.

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

<b>Mobility</b>	:	Dissolves in water. Product traces could be diluted in water. Prevent contamination of soil and water. If entering the soil, it will move and contaminate groundwater, due to desoxygenation risk. If the spill flow into a current, it could be necessary a cutting back or aeration treatment.
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## 12.5 Results of PBT and vPvB assessment

- PBT** : This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
- vPvB** : This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

## 12.6 Other adverse effects

Poses a significant risk of oxygen depletion in purification plants.

## SECTION 13: Disposal considerations

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### 13.1. Waste treatment methods

- Precautions** : Refer to Section 7 before handling the product or containers
- Waste disposal** : Recover or recycle if possible. Otherwise: Incineration
- Product disposal** : Recover or recycle if possible. Otherwise: Incineration
- Container disposal** : Drain container thoroughly. Rinse three times with water. Send to drum recoverer or metal reclaimer.
- Additional information** : The recommendations given are considered appropriate for safe disposal. However, local regulations may be more stringent and these must be complied with.

## SECTION 14: Transport information

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	ADR/RID	ADNR/ADN	IMDG	IATA
<b>14.1. UN Number</b>	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.2. UN Proper Shipping Name</b>	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport Hazard Class(es)</b>	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4. Packing Group</b>	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental Hazards</b>	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No
<b>14.6. Special Precautions for users</b>	No data available	No data available	No data available	No data available

### 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Has no use



## SECTION 15: Regulatory information

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

Regulation 1272/2008, on classification, labelling and packaging of substances and mixtures.

Directive 67/548/EEC on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances.

### 15.2 Chemical Safety Assessment:

Not applicable

## SECTION 16: Other information

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The data is confirmed based on the state of our knowledge, but does not determine how the production properties and cannot be used to justify legally binding contracts.

Abbreviations and acronyms

<b>REACH</b>	:	Registration, Evaluation, Authorisation and Restriction of Chemical
<b>MARPOL</b>	:	(from Marine Pollutant) International Convention for the Prevention of Marine Pollution from Ships
<b>N/A</b>	:	Not applicable
<b>N/D</b>	:	Not determined
<b>NE</b>	:	Not established
<b>VOC</b>	:	Volatile Organic Compound
<b>AICS</b>	:	Australian Inventory of Chemical Substances
<b>AIHA WEEL</b>	:	American Industrial Hygiene Association Workplace Environmental Exposure Limits
<b>DSL</b>	:	Domestic Substance List (Canada)
<b>ELINCS</b>	:	European List of Notified Chemical Substances
<b>ENCS</b>	:	Existing and new Chemical Substances (Japanese inventory)
<b>IECSC</b>	:	Inventory of Existing Chemical Substances in China
<b>KECI</b>	:	Korean Existing Chemicals Inventory
<b>NDSL</b>	:	Non-Domestic Substances List (Canada)
<b>NZIoC</b>	:	New Zealand Inventory of Chemicals
<b>PICCS</b>	:	Philippine Inventory of Chemicals and Chemical Substances
<b>TLV</b>	:	Threshold Limit Value (American Conference of Governmental Industrial Hygienists)
<b>TSCA</b>	:	Toxic Substances Control Act (U.S. inventory)
<b>UVCB</b>	:	Substances of Unknown or Variable composition, Complex reaction products or Biological materials
<b>IBC Code</b>	:	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
<b>UN</b>	:	United Nations (also UNO: United Nations Organization)
<b>NOEC</b>	:	No Observed Effect Concentration
<b>NOELR</b>	:	No Observable Effect Loading Rate
<b>OECD</b>	:	Organization for Economic Co-operation and Development
<b>ASTM</b>	:	American Society for Testing and Materials

<b>WAF</b>	:	Water Accommodated Fraction
<b>ADR</b>	:	Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
<b>IMDG</b>	:	International Maritime Code for Dangerous Goods
<b>IATA</b>	:	International Air Transport Association
<b>GHS</b>	:	Globally Harmonised System of Classification and Labeling of Chemicals
<b>EINECS</b>	:	European Inventory of Existing Commercial Chemical Substances
<b>CAS</b>	:	Chemical Abstracts Service (division of the American Chemical Society)
<b>DNEL</b>	:	Derived No-Effect Level (REACH)
<b>PNEC</b>	:	Predicted No-Effect Concentration (REACH)
<b>LC</b>	:	Lethal Concentration
<b>LD</b>	:	Lethal Dose
<b>LL</b>	:	Lethal Loading
<b>EC</b>	:	Effective Concentration
<b>EL</b>	:	Effective Loading
<b>LC50</b>	:	Lethal concentration, 50 percent
<b>LD50</b>	:	Lethal dose, 50 percent
<b>PBT</b>	:	Persistent, Bioaccumulative and Toxic
<b>vPvB</b>	:	very Persistent and very Bioaccumulative
<b>Acute Tox, 4</b>	:	Acute toxicity - Category 4
<b>Notice to reader</b>	:	The information contained herein is accurate to the latest knowledge and describes the product from the point of view of health and environmental protection as well as safe handling. The information presented in this SDS refers to the technical product only and will not apply to any processed product. Final determination of the suitability of any materials for the chosen application(s) is the sole responsibility of the user"