

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Supersedes date 05-Oct-2025

Revision date 29-Jan-2026

Revision Number 4

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

1.1. Product identifier

Product Code(s)	51303
Safety data sheet number	51303
Product Name	POLYETHYLENE GLYCOL 400
CAS No	25322-68-3
Synonyms	SYMPATENS - PEG/400, SYMPATENS PEG/400 PC, POLYETHYLENE GLYCOL 400 PEG, POLYETHYLENE GLYCOL 400 PHARMA, POLYETHYLENE GLYCOL 400 PEG IB, POLYETHYLENE GLYCOL 400 NF, POLYETHYLENE GLYCOL 400 INS, POLYETHYLENE GLYCOL 400 PH INS, POLYETHYLENE GLYCOL 400 DOW, POLYETHYLENE GLYCOL 400 PH BE, POLYETHYLENE GLYCOL 400 ITA, KOLLISOLV PEG 400, INEOX PEG400PH, MACROGOL 400 PH EUR, PLURIOL E 400
Pure substance/mixture	Substance
Formula	$H(C_2H_4O)_nHO$
Molecular weight	400.00 g/mol

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

Recommended use	Pharmaceuticals Personal care Cosmetic additive Chemical Plastics Inks Surface coating Adhesives Lubricant Ceramics Industrial wood coating Solvent Chemical intermediate Raw material for the chemical-technical industry.
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1.3. Details of the supplier of the safety data sheet

Supplier

Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
GBR

For further information, please contact

E-mail address SDS.EMEA@univarsolutions.com
Non-Emergency Telephone Number +44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone SGS - +32 (0)3 575 55 55 (24h)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

Not classified

2.2. Label elements

Not classified

Hazard statements

Not classified

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.1 Substances**

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
POLYETHYLENE GLYCOL 400 25322-68-3	>= 99.5 %	-	-	Not classified	-	-	-

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration >= 0.1% (UK REACH Article 59)

SECTION 4: First aid measures**4.1. Description of first aid measures**

General advice Get medical advice/attention if you feel unwell. Remove contaminated clothing and shoes.

Inhalation IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Get medical attention if symptoms occur.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

	Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms occur.
Skin contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if symptoms occur.
Ingestion	Immediately rinse mouth and drink plenty of water (200-300 ml). Do NOT induce vomiting. Get medical attention if symptoms occur.

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

Symptoms

Inhalation	Inhalation of vapours in high concentration may cause irritation of respiratory system.
Eyes	May cause temporary eye irritation. Redness.

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

Note to doctors	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Dry chemical, CO2, alcohol-resistant foam or water spray.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	When heated and in case of fire, toxic vapours/gases may be formed.
Hazardous combustion products	Carbon oxides.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with skin, eyes and inhalation of vapours. In case of spills, beware of slippery floors and surfaces.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions	See Section 12 for additional Ecological Information.
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6.3. Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Pick up and transfer to properly labelled containers. After cleaning, flush away traces with water.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections	See section 8 for more information. See section 13 for more information.
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SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Advice on safe handling	Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid contact with skin, eyes and inhalation of vapours. Keep away from heat, sparks and open flame. Use explosion-proof electrical, ventilating and lighting equipment. Keep container closed when not in use.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using the product. Wash hands before breaks and immediately after handling the product. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep container tightly closed in a dry and well-ventilated place. Keep away from heat, sparks and open flame. Store away from the following materials. Protect from moisture. Strong oxidising agents. Strong acids. Strong bases. Keep at temperatures between 5 and 35 °C.
Packaging materials	Suitable container/equipment material: Carbon Steel. stainless steel. High density polyethylene (HDPE). Low density polyethylene (LDPE). Unsuitable container/equipment material: copper.

7.3. Specific end use(s)

Specific use(s)
See section 1 for more information.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

Exposure Limits	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Biological occupational exposure limits	This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
POLYETHYLENE GLYCOL 400 25322-68-3		112 mg/kg bw/day [4] [6]	40.2 mg/m ³ [4] [6]

[4] Systemic health effects.
[6] Long term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
POLYETHYLENE GLYCOL 400 25322-68-3	40 mg/kg bw/day [4] [6]		7.14 mg/m ³ [4] [6]

[4] Systemic health effects.
[6] Long term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
POLYETHYLENE GLYCOL 400 25322-68-3	0.273 g/L	1 mg/L	27.3 mg/L	0.1 mg/L	

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
POLYETHYLENE GLYCOL 400 25322-68-3	1030 mg/kg sediment dw	103 mg/kg sediment dw		46.4 mg/kg soil dw	

8.2. Exposure controls

Engineering controls Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles). Use eye protection according to EN ISO 16321-1.

Hand protection Wear suitable gloves. Gloves must conform to standard EN 374.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
	Polyvinyl chloride (PVC)	0.35 mm	>480 minutes
	Wear protective butyl rubber gloves	0.7 mm	> 30 minutes
	Wear protective nitrile rubber	0.4 mm	> 30 minutes

	gloves		
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Skin and body protection	Wear appropriate clothing to prevent reasonably probable skin contact.
Respiratory protection	Use appropriate respiratory protection.
Recommended filter type:	Filter type: Type A. or. Particulate filter, type P2. or. Particulates filter conforming to EN 143. or. Mask filter for respirable fine particles (FFP2). or. Filtering Half-face mask (DIN EN 149).
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using the product. Wash hands before breaks and immediately after handling the product. Remove contaminated clothing and protective equipment before entering eating areas.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid	
Appearance	Clear liquid	
Colour	Colourless	
Odour	Characteristic.	
Odour threshold	No information available	
Property	Values	Remarks • Method
Melting point / freezing point	4 - 8 °C	
Initial boiling point and boiling range		No information available.
Flammability		Not classified.
Flammability Limit in Air		No information available.
Upper flammability or explosive limits		
Lower flammability or explosive limits		
Flash point	> 200 °C	
Autoignition temperature	> 320 °C	
Decomposition temperature	> 250 °C	
pH		No information available.
pH (as aqueous solution)	4.5 - 7.0	solution (5 %).
Kinematic viscosity		Not determined.
Dynamic viscosity	0.007995 - 0.008558 Pa.s	@ 100 °C.
Water solubility	Completely soluble	
Solubility(ies)	Solubility in other solvents Alcohol Aromatic hydrocarbons	
Partition coefficient	Log Kow -0.7	@ 30 °C. OECD 107.
Vapour pressure	< 0.01 hPa	@ 20 °C.
Relative density	1.091 - 1.13	
Bulk density		No information available
Liquid Density	No information available	No information available
Relative vapour density	> 1	
Particle characteristics		Not applicable. liquid.
Particle Size	No information available	
Particle Size Distribution	No information available	
Explosive properties	Based on available data the classification criteria are not met.	
Oxidising properties	No information available	

9.2. Other information

Molecular weight	400.00 g/mol
VOC content	0 %

SECTION 10: Stability and reactivity**10.1. Reactivity**

Reactivity Stable under recommended storage conditions. Hygroscopic.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions The following materials may react with the product.: Strong oxidising agents. Acids. Bases.

10.4. Conditions to avoid

Conditions to avoid Keep away from heat, sparks and open flame. Use spark-proof tools and explosion-proof equipment.

10.5. Incompatible materials

Incompatible materials Protect from moisture. Strong oxidising agents. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon oxides.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Information on likely routes of exposure****Product Information**

Inhalation Inhalation of vapours in high concentration may cause irritation of respiratory system.

Eye contact May cause temporary eye irritation.

Skin contact Non-irritating during normal use.

Ingestion May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics**Symptoms****Acute toxicity****Numerical measures of toxicity****Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
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POLYETHYLENE GLYCOL 400	> 15000 mg/kg (Rat)	> 20000 mg/kg (Rabbit)	-
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Based on available data the classification criteria are not met.

POLYETHYLENE GLYCOL 400 (25322-68-3)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					non-irritant

Serious eye damage/eye irritation Based on available data the classification criteria are not met.

POLYETHYLENE GLYCOL 400 (25322-68-3)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					non-irritant

Respiratory or skin sensitisation Based on available data the classification criteria are not met.

POLYETHYLENE GLYCOL 400 (25322-68-3)

Method	Species	Exposure route	Results
	Guinea pig	Dermal	Not a skin sensitiser

Germ cell mutagenicity Based on available data the classification criteria are not met.

Component Information

POLYETHYLENE GLYCOL 400 (25322-68-3)

Method	Species	Results
		Not mutagenic

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.

Other adverse effects No information available.

SECTION 12: Ecological information**12.1. Toxicity**

Ecotoxicity Not considered to be harmful to aquatic life.

Method	Species	Endpoint type	Effective dose	Exposure time	Results
OECD Test No. 203: Fish, Acute Toxicity Test	Poecilia reticulata	LC50	> 100 mg/L	96 hours	
OECD Test No. 202: Daphnia sp., Acute Immobilisation Test	Daphnia magna	EC50	> 100 mg/L	48 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test	Desmodesmus subspicatus	ErC50	> 100 mg/L	96 hours	

12.2. Persistence and degradability

Persistence and degradability Readily biodegradable.

Method	Exposure time	Value	Results
OECD Test No. 301D: Ready Biodegradability: Closed Bottle Test (TG 301 D)	28 days	Biodegradation 75 %;	Readily biodegradable
OECD Test No. 301A: Ready Biodegradability: DOC Die-Away Test (TG 301 A)		Biodegradation > 70 %	Readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulation MATERIAL DOES NOT BIOACCUMULATE.

Chemical name	Partition coefficient
POLYETHYLENE GLYCOL 400	-0.7

12.4. Mobility in soil

Mobility in soil Soluble in water.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
POLYETHYLENE GLYCOL 400	The substance is not PBT / vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Waste to be treated as controlled waste. Disposal to licensed waste disposal site in accordance with local Waste Disposal Authority.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None

IMDG

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None

ADR

14.1 UN number or ID number	Not regulated
14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	No
14.6 Special precautions for user	
Special Provisions	None

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Authorisations and/or restrictions on use:**

This product does not contain substances subject to authorisation (UK REACH - Annex XIV).

This product does not contain substances subject to restriction (UK REACH - Annex XVII).

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECI	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:

TSCA	- United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL	- Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS	- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS	- Japan Existing and New Chemical Substances
IECSC	- China Inventory of Existing Chemical Substances
KECL	- Korean Existing and Evaluated Chemical Substances
PICCS	- Philippines Inventory of Chemicals and Chemical Substances
AIIC	- Australian Inventory of Industrial Chemicals
NZIoC	- New Zealand Inventory of Chemicals

15.2. Chemical safety assessment**Chemical Safety Report**

A Chemical Safety Assessment is not required for this substance

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		

Revision Note **SDS sections updated 1 4 6 7 8 9 10 11 12 16****Classification procedure**

Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method

Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

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This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet