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SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Product	Polyethylene Glycol PEG 200 / PEG 400 Series	**Revision date**	2026-11-16
Version	1.0	**Brand**	Richest

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

Product name	Polyethylene Glycol PEG 200 / PEG 400 Series
Synonyms	Polyethylene Glycol 200; Polyethylene Glycol 400; PEG-4 (PEG 200 INCI); PEG-8 (PEG 400 INCI); Macrogol 200; Macrogol 400; Polyoxyethylene glycol
CAS No.	25322-68-3 (common CAS for PEG 200 and PEG 400)
EC No.	500-038-2
Molecular formula	H(OCH2CH2O)nH (n varies by grade)
Molecular weight	PEG 200: 180–220; PEG 400: 360–440 (average molecular weight in the selected public typical specification)
Relevant identified uses	PEG 200: medium for organic synthesis, chemical intermediate, humectant, plasticizer, lubricant and ink/dye carrier; PEG 400: base for cosmetic and pharmaceutical formulations, rubber and textile lubricant, solvent, humectant and chemical intermediate; Adhesives, coatings, cleaning products, agriculture and paper formulations as identified by Dow for the respective PEG grades
Uses advised against	No specific uses advised against were identified in the reviewed sources.
Company	Richest Group
Address	No. 999, Jiangyue Rd, Minhang, Shanghai 201114, China
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SECTION 2: Hazards identification

GHS Classification	Public PEG 200 SDS: not classified as hazardous under GHS; no signal word and no hazard statements. The same CAS applies to PEG 400; final grade-specific classification is subject to the Richest SDS.
Pictogram(s)	None
Signal word	None
Hazard statement(s)	None
Precautionary statement(s)	None
Other hazards	No other hazards were identified in the reviewed sources.

SECTION 3: Composition/information on ingredients

Component	Polyethylene Glycol PEG 200 / PEG 400 Series
CAS No.	25322-68-3 (common CAS for PEG 200 and PEG 400)

SECTION 3: Composition/information on ingredients	
EC No.	500-038-2
Classification	Public PEG 200 SDS: not classified as hazardous under GHS; no signal word and no hazard statements. The same CAS applies to PEG 400; final grade-specific classification is subject to the Richest SDS.
Concentration	Industrial polymer grades; assay is not stated in the selected public specification

SECTION 4: First-aid measures	
If inhaled	Inhalation: move to fresh air if discomfort occurs.
In case of skin contact	Skin contact: wash with soap and water.
In case of eye contact	Eye contact: rinse with water and obtain medical attention if irritation persists.
If swallowed	Ingestion: rinse mouth and obtain medical attention if unwell.
Most important symptoms and effects	No data available
Indication of immediate medical attention	Treat symptomatically. Show this safety data sheet to medical personnel.

SECTION 5: Fire-fighting measures	
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Avoid a solid water stream. Firefighters should wear self-contained breathing apparatus and full protective clothing; combustion can produce carbon monoxide and carbon dioxide.
Unsuitable extinguishing media	No data available
Special hazards arising from the chemical	PEG 200 (Alliance Chemical): Heated containers may rupture; combustion can generate carbon monoxide and carbon dioxide.
Advice for firefighters	PEG 200 (Alliance Chemical): Firefighters should use self-contained breathing apparatus and full protective equipment.

SECTION 6: Accidental release measures	
Personal precautions and emergency procedures	Avoid contact with the material. Ensure adequate ventilation. Wear appropriate personal protective equipment.
Environmental precautions	Prevent uncontrolled release to drains, soil and watercourses.
Methods for containment and cleaning up	Wear safety glasses and gloves; spills can make floors slippery. Avoid release of large quantities to drains or waterways. Absorb or wipe up, rinse the area and place residues in a suitable closed container for disposal.

SECTION 7: Handling and storage	
Precautions for safe handling	Use adequate ventilation, avoid skin and eye contact and wash thoroughly after handling. Keep the original container tightly closed in a cool, dry, well-ventilated place out of direct sunlight.
Conditions for safe storage, including incompatibilities	Keep tightly closed in a dry, ventilated place, protected from moisture, prolonged heat and direct sunlight. Public manufacturer shelf life: two years.

SECTION 8: Exposure controls/personal protection	
Occupational exposure limit values	PEG 200 (Alliance Chemical): No established occupational exposure limits are listed. ICSC 1517 for PEG 200-600 lists a German MAK value of 200 mg/m3 for the inhalable fraction, peak limitation category II(2), pregnancy risk group C.

SECTION 8: Exposure controls/personal protection

Biological limit values	No biological limit values were identified in the reviewed sources.
Appropriate engineering controls	No established occupational exposure limit is stated in the public SDS. General ventilation is normally adequate; safety glasses are recommended and gloves are recommended for prolonged or repeated contact. Respiratory protection is not normally required.
Eye/face protection	Use safety eyewear appropriate to the risk of exposure.
Skin and body protection	Wear suitable protective gloves and clothing appropriate to the risk of exposure.
Respiratory protection	Use suitable respiratory protection if exposure limits may be exceeded or dust, mist or vapour is generated.
Thermal hazards	No specific thermal hazards were identified in the reviewed sources; see Sections 5 and 10.

SECTION 9: Physical and chemical properties

Physical state	PEG 400: colorless liquid; PEG 200: not established
Colour	PEG 200: Clear, viscous liquid at 27 deg C (Dow CARBOWAX selection guide). PEG 400: Clear, viscous liquid at 27 deg C (Dow); Merck 817003 describes a clear, colourless, hygroscopic viscous liquid.
Odour	PEG 200 (Alliance Chemical technical grade): Mild to odourless.
Melting point / freezing point	The selected specification lists PEG 400 freezing point 4–10°C and does not state a PEG 200 freezing point.
Boiling point / boiling range	PEG 200: Approximately 250 deg C at 1013 hPa (Sigma-Aldrich/VWR); Alliance Chemical reports greater than 200 deg C. PEG 400: Approximately 250 deg C at 1013 hPa (Sigma-Aldrich/Avantor).
Flammability	PEG 200 and PEG 400: ICSC 1517, covering PEG 200-600, classifies the material as combustible.
Explosion / flammability limits	No data available
Flash point	PEG 200: 180 deg C (Sigma-Aldrich/VWR); Alliance Chemical reports approximately 171-185 deg C, closed cup. PEG 400: 245 deg C (Sigma-Aldrich/Avantor); Merck 817003 separately reports 138.6 deg C. These supplier values are retained separately because test methods or product specifications may differ.
Auto-ignition temperature	PEG 200 and PEG 400: Approximately 360 deg C according to ICSC 1517 for PEG 200-600. PEG 400 (Merck 817003): 360 deg C, DIN 51794.
Decomposition temperature	No data available
pH	PEG 200 (Alliance Chemical): 5-7. PEG 400 (Merck 817003): 5-7 for 100 g/L in water at 20 deg C.
Viscosity	PEG 200: 4.3 cSt at 100 deg C (Dow). PEG 400: 7.3 cSt at 100 deg C (Dow); Merck 817003 reports kinematic viscosity of 97-110 mm2/s at 20 deg C and a separate dynamic-viscosity specification of 112-124 mPa.s at 20 deg C.
Solubility	Colorless transparent, water-soluble liquids.
Partition coefficient n-octanol/water	No data available
Vapour pressure	PEG 200 and PEG 400: Less than 10 Pa at 20 deg C according to ICSC 1517 for PEG 200-600. PEG 400 (Merck 817003): Less than 0.01 hPa at 20 deg C.

SECTION 9: Physical and chemical properties

Density and/or relative density	PEG 200: 1.1238 g/cm3 at 20 deg C, 1.0921 g/cm3 at 60 deg C and 1.0763 g/cm3 at 80 deg C (Dow); Sigma-Aldrich/VWR reports 1.124 g/cm3 at 20 deg C. PEG 400: 1.1255 g/cm3 at 20 deg C, 1.0931 g/cm3 at 60 deg C and 1.0769 g/cm3 at 80 deg C (Dow); Sigma-Aldrich/Avantor reports 1.13 g/cm3 at 20 deg C, while Merck 817003 reports 1.116 g/cm3 at 20 deg C and 975.5 hPa.
Relative vapour density	No data available
Particle characteristics	Not applicable (liquid).
Additional information	Colorless transparent, water-soluble liquids. The selected specification lists PEG 400 freezing point 4–10°C and does not state a PEG 200 freezing point. Dow identifies PEG 200 as INCI PEG-4 and PEG 400 as INCI PEG-8.
Peg 400 average molecular weight	COA 360–440; TDS narrative 380–420 g/mol (conflict retained, not merged)
Peg 400 form	Clear, colorless, viscous liquid

SECTION 10: Stability and reactivity

Reactivity	PEG 200 (Alliance Chemical): Not reactive under normal conditions.
Chemical stability	Stable under recommended storage conditions and not reactive under normal use. Avoid prolonged heat, air, moisture and direct sunlight. Incompatible with strong oxidizing agents, strong acids and strong bases.
Possibility of hazardous reactions	PEG 200 (Alliance Chemical): No hazardous reactions under normal processing conditions. PEG 400 (ProSciTech): No dangerous reactions known.
Conditions to avoid	PEG 200 (Alliance Chemical): Avoid prolonged exposure to heat and air because slow oxidation can occur; also avoid moisture and direct sunlight.
Incompatible materials	PEG 200 (Alliance Chemical): Strong oxidising agents, strong acids and strong bases.
Hazardous decomposition products	PEG 200 (Alliance Chemical): Combustion can produce carbon monoxide and carbon dioxide; long-term oxidation can produce aldehydes and organic acids.

SECTION 11: Toxicological information

Toxicological summary	GHS health-hazard classification from the reviewed public SDS: Public PEG 200 SDS: not classified as hazardous under GHS; no signal word and no hazard statements. The same CAS applies to PEG 400; final grade-specific classification is subject to the Richest SDS.; None

SECTION 12: Ecological information

Environmental fate	Dow states that PEG 200 is readily biodegradable based on OECD 301F and PEG 400 on OECD 301D. Other ecological endpoints: no data available in the selected sources.

SECTION 13: Disposal considerations

Product disposal methods	Dispose of contents and container through an authorized facility in accordance with applicable federal, state and local requirements. Do not dispose of large quantities into drains or waterways.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal in accordance with local regulations.

SECTION 14: Transport information

UN Number (ADR/RID, IMDG, IATA)	Not regulated as dangerous goods
UN Proper Shipping Name	Not regulated as dangerous goods
Transport hazard class(es)	Not regulated as dangerous goods
Packing group	Not regulated as dangerous goods
Environmental hazards / Marine pollutant	See cited public SDS
Special precautions for user	Not regulated as dangerous goods under US DOT, IMDG or IATA in the cited public PEG 200 SDS; final PEG 200/PEG 400 shipment classification is subject to the Richest SDS.

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product	The Alliance Chemical SDS lists PEG 200 on the US EPA TSCA Active Inventory. No food, cosmetic or pharmaceutical compliance claim is made for these industrial grades; other jurisdictions require confirmation for final supply.

SECTION 16: Other information

Full text of H-Statements	None
Revision date	2026-11-16
Version	1.0
References	Supplier technical documents, public SDS/COA/TDS and regulatory sources reviewed. Public data citations are listed below. Public data sources: Polyethylene glycol PEG — technical indicators and packaging: http://www.jshihua.com/wap_product_detail_en/id/17.html | CARBOWAX Polyethylene Glycol 200: https://www.dow.com/en-us/pdp.carbowax-polyethylene-glycol-200.85515z.html | CARBOWAX Polyethylene Glycol 400E: https://www.dow.com/en-us/pdp.carbowax-polyethylene-glycol-400e.114428z.html | Polyethylene glycol 200 for synthesis — identity and EC number: https://www.merckmillipore.com/AU/en/product/Polyethylene-glycol-200,MDA_CHEM-807483 | Polyethylene Glycol 200 (PEG) Safety Data Sheet: https://docs.alliancechemical.com/sds/polyethylene-glycol-200-peg | Polyethylene glycol 400 SDS: https://www.merckmillipore.com/INTL/en/product/msds/MDA_CHEM-807485 | CARBOWAX PEGs and MPEGs Selection Guide: https://www.dow.com/content/dam/dcc/documents/118/118-01789-01-carbowax-pegs-and-mpegs-selection-guide.pdf | Polyethylene Glycol 200, Sigma-Aldrich product data: https://uk.vwr.com/store/product/2342162/polyethylene-glycol-200-sigma-aldrich | Polyethylene Glycol 400, Sigma-Aldrich product data: https://www.avantorsciences.com/us/en/product/7513493/polyethylene-glycol-400-sigma-aldrich | Polyethylene glycol 400, product 817003: https://www.merckmillipore.com/INTL/en/product/Polyethylene-glycol-400,MDA_CHEM-817003 | Polyethylene Glycol 200 (PEG 200) Technical Grade Safety Data Sheet: https://docs.alliancechemical.com/sds/polyethylene-glycol-200-peg-200-technical-grade | ICSC 1517: Polyethylene glycol (PEG 200-600): https://www.inchem.org/documents/icsc/icsc/eics1517.htm | Polyethylene Glycol 400 Safety Data Sheet: https://sds.proscitech.com.au/polyethylene-glycol-400
Abbreviations	CAS: Chemical Abstracts Service; ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road; IMDG: International Maritime Dangerous Goods; IATA: International Air Transport Association; SDS: Safety Data Sheet.

SECTION 16: Other information

Disclaimer	The information in this SDS applies to the specified product and is provided in good faith based on information available to Richest Group at the date of issue. It describes health, safety and environmental requirements and does not constitute a guarantee of product properties. Users must assess suitability and comply with applicable regulations.