

### PRODUCT IDENTIFICATION



**Product Name:** Polyethylene Glycol 200 (PEG)

**CAS Number:** 25322-68-3

**Molecular Formula:**  $\text{H}(\text{OCH}_2\text{CH}_2)_n\text{OH}$

**Molecular Weight:** 200 g/mol

**Grade:** Laboratory Grade

**Purity / Concentration:** Not Available

**Synonyms:** PEG 200, Polyethylene Glycol 200

### PRODUCT OVERVIEW

Polyethylene Glycol 200 (PEG 200), Laboratory Grade, from Alliance Chemical is a clear, viscous liquid with a typical assay of 98.5%. PEG 200 is commonly used as a mobile phase component in chromatography and as a humectant in personal care products.

**Grade Significance:** Laboratory Grade PEG 200 signifies that the product meets stringent quality control standards and is suitable for use in research, development, and analytical applications. This grade ensures a high level of purity and minimal interference from impurities, providing reliable and reproducible results.

### CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	98.5	95	—	Titration
Color (APHA)	APHA	10	—	20	ASTM D1209
pH		6.5	4	7	USP <791>
Specific Gravity (20°C)	g/mL	1.124	1.12	1.13	USP <841>
Residue After Ignition	%	0.01	—	0.1	USP <281>
Water Content	%	0.2	—	0.5	Karl Fischer Titration
Heavy Metals (as Pb)	ppm	ND	—	1	USP <231>
Iron (Fe)	ppm	0.1	—	1	ICP-OES

ND = Not Detected. Values are typical and may vary by lot.

### PHYSICAL & CHEMICAL PROPERTIES

<b>Appearance</b>	Clear viscous liquid, pale transparent fluid	<b>Odor</b>	Odorless
<b>Form</b>	Liquid	<b>Boiling Point</b>	287°C (549°F)
<b>Melting / Freezing Point</b>	4°C (39°F)	<b>Flash Point</b>	232°C (450°F)
<b>Specific Gravity</b>	1.126	<b>Solubility</b>	Highly soluble in water, most organic solvents
<b>Molecular Formula</b>	$\text{H}(\text{OCH}_2\text{CH}_2)_n\text{OH}$	<b>Molecular Weight</b>	200 g/mol
<b>Vapor Pressure (20°C)</b>	0.1 mmHg	<b>Viscosity (25°C)</b>	50-70 cP
<b>Refractive Index (20°C)</b>	1.460	<b>Density (25°C)</b>	1.125 g/mL

## APPLICATIONS

1. **Chromatography** — PEG 200 is commonly employed as a mobile phase component in reversed-phase high-performance liquid chromatography (HPLC). Its properties facilitate the separation of organic compounds based on their hydrophobicity.
2. **Personal Care** — In creams and lotions, PEG 200 functions as a humectant, attracting and retaining moisture to enhance skin hydration. It contributes to the smooth texture and emollient properties of these products.
3. **Pharmaceuticals** — PEG 200 serves as a solvent and stabilizer in various pharmaceutical formulations. Its ability to solubilize and maintain the stability of active ingredients makes it a valuable excipient.
4. **Lubrication** — PEG 200 can act as a lubricant in machinery and equipment, reducing friction and wear between moving parts. Its lubricating properties contribute to the smooth operation and extended lifespan of mechanical systems.
5. **Chemical Synthesis** — PEG 200 can be used as a polar, aprotic solvent in various chemical reactions. Its ability to dissolve a wide range of compounds makes it useful in organic synthesis.
6. **Coatings** — PEG 200 can be incorporated into coatings to improve flexibility and water retention. This can enhance the durability and performance of the coating in various applications.

## STORAGE & HANDLING

Proper storage is crucial to maintain the integrity and purity of PEG 200. Exposure to extreme temperatures or contaminants can degrade the product, affecting its performance in sensitive applications. Store in a tightly sealed container in a cool, dry, and well-ventilated area to prevent degradation.

- Store in a cool, dry place away from direct sunlight.
- Use containers made of HDPE or glass to prevent contamination.
- Avoid contact with strong oxidizing agents.
- Ensure proper ventilation in storage areas to prevent accumulation of vapors.
- Use personal protective equipment (PPE) such as gloves and goggles when handling.

## AVAILABLE PACKAGING

- 1 Quart
- 1 Gallon
- 5 Gallon
- 15 Gallon
- 55 Gallon
- 275 Gallon
- 330 Gallon

## SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

### Signal Word: Not Classified

No GHS pictograms assigned.

### Hazard Statements:

- Not Classified: Not classified as hazardous under GHS based on available data.

**Emergency Contact:** CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

*For complete safety information, refer to the Safety Data Sheet (SDS) for this product.*

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