



ELHUME - PGO G2™ (Propylene Glycol)

Technical Datasheet

1. Technical Datasheet

Property	Specification
Physical Properties	
Appearance	White to Off-White solid; Clear, colorless, viscous liquid
Physical Form	Liquid
Odor	Practically odorless
Molecular Weight (g/mol)	76.09
Density or Specific Gravity	1.04 g/mL at 68 °F
Viscosity	0.581 cP at 20 °C
Refractive Index	[n] _D /20: 1,431-1,433
pH (if aqueous solution)	6-8 (100g/l, H ₂ O, 20°C)
Thermal Properties	
Melting Point	-76°F
Boiling Point	370.8 °F at 760 mmHg
Flash Point	210 °F
Autoignition Temperature	700 °F

2. Processing Methods



Cosmetic moisturizers

When adding Propylene Glycol in cosmetic creams, incorporate it into the water phase to ensure even distribution and prevent separation. Use at 3-10% concentration as a humectant and solvent to improve skin hydration and product texture. Add it after heating to preserve its stability. Mix thoroughly to achieve a smooth, consistent formulation.

Key Ingredients	Indicative Dosage (% w/w)
Water	65%
Propylene Glycol	5%
Cetearyl Alcohol	4%
Glyceryl Stearate	3%
Mineral Oil	8%
Stearic Acid	3%
Dimethicone	2%
Preservative (e.g., Phenoxyethanol)	0.8%
Fragrance	0.2%
Xanthan Gum	0.5%
Glycerin	8.5%

Hair shampoo

Use Propylene Glycol in the aqueous phase to improve scalp hydration and enhance the solubility of active ingredients in shampoos.

Key Ingredients	Indicative Dosage (% w/w)
Sodium Laureth Sulfate	8-12%
Cocamidopropyl Betaine	4-8%
Propylene Glycol	1-8%
Glycerin	2-4%
Water	50-60%
Preservatives, Fragrance/Essential Oil, Other actives	



Face Washes

When adding Propylene Glycol in face wash formulations, include it in the water phase for uniform mixing and to enhance solubility of actives. Use at 1-8% to boost hydration and improve skin feel without stickiness. Add after surfactants to maintain clarity and prevent foaming issues. Mix gently to preserve product stability and texture.

Key Ingredients	Indicative Dosage (% w/w)
Deionized Water	50%
Glycerin	15%
Propylene Glycol	15%
Polysorbate 20	15%
PEG-150 (Polyethylene Glycol 6000)	2%
Sucrose Cocoate	0.7%
Sorbitol	0.7%
Sodium Stearoyl Lactylate	0.5%
Sodium Citrate	0.5%

Makeup foundation lotion

In foundation lotion formulation, add Propylene Glycol to the water phase early on to act as a humectant and solvent. Ensure it is fully dissolved before emulsification to enhance texture, pigment dispersion, and skin feel.

Key Ingredients	Indicative Dosage (% w/w)
Stearic acid	2%
Cetyl alcohol	4%
Paraffin liquid	20%
Dimethicone	5%
Tween 80	3.65%
Propylparaben	0.02%
Propylene glycol	5%
Xanthan gum	0.3%
Methylparaben	0.18%
Distilled water	30-40%
Other additives	

3. Dosing by Application



Products	Authorized dosage
Cosmetics	Upto 50%
Lacquers and varnishes	4-10%

The information and data contained herein are believed to be accurate but may not be all inclusive and should only be used as a guide. The information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the product for his particular use and on condition that they assume the risk of the use thereof.

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