



Propylene Glycol USP

for Cosmetic Applications





PG USP

Product characteristics

- Produced by propylene oxide with purified water and no solvents, or additives
- A viscous, clear liquid with a weak characteristic odor
- Relatively non-toxic, hygroscopic liquid and antimicrobial properties
- Soluble in water and various organic compounds
- Safe for pharmaceutical use under FDA 21 CFR 184.1666
- Produce under the KFDA approval

SK picglobal PG USP is a high-purity (over 99.8%) product and can be applied to cosmetic additives (solvents, humectants)



Quality

SK picglobal PG USP meets global standards and regulations as below

- PCPC (Personal Care Products Council) – renamed CTFA
- INCI name for cosmetic additive : propylene glycol, E-no = 490 as cosmetic material
- FEMA(Flavor and Extract Manufacturers Association) registration No. : 2940
- Safety evaluation by JECFA : PG no = 925
- Halal-certified

SK picglobal is continuously improving our quality management system to provide our customers with the best quality, stability, and reliability.

Applications

PG USP has excellent moisturizing properties and viscosity softening function, so can be used in various cosmetic products:

- Bath : Soaps, gels, moisturizers
- Cosmetics : Lipsticks, eyeliners, eye shadows, brushes
- Skincare : Creams, lotions, oils
- Shaving : Foams, gels, aftershave lotions

Safety

Cosmetic Ingredient Review (CIR) recognized PG as a safe ingredient for use in

- Personal care products
- Cosmetics at concentrations up to 50% to avoid irritating the skin

PG is not included in the restricted list in the EU cosmetic regulation 1223/2009 PG can cause irritant contact dermatitis, so care must be taken when using it

REACH Registration No: 01-2119456811-38-0020



Safety, Health and Environment

PG USP is safe, but when handling,

- Do not touch the eyes directly
- Wear protective equipment
- Work in a well-ventilated place
- If it comes into contact with hands or any part of the body, wipe with running water



If spilled,

- Wash with soap
- Wipe off with a hygroscopic tissue or cloth
- Don't worry, it will be degraded by bacteria



Transport and storage

For safe transportation and stable quality,

- Strategically located terminal facilities
- Storage with nitrogen purged : no contact with air or moisture

PG USP is packaged and transported as

- ISO & Flexitanks, IBC bags, coated steel, and plastic drums (HDPE)

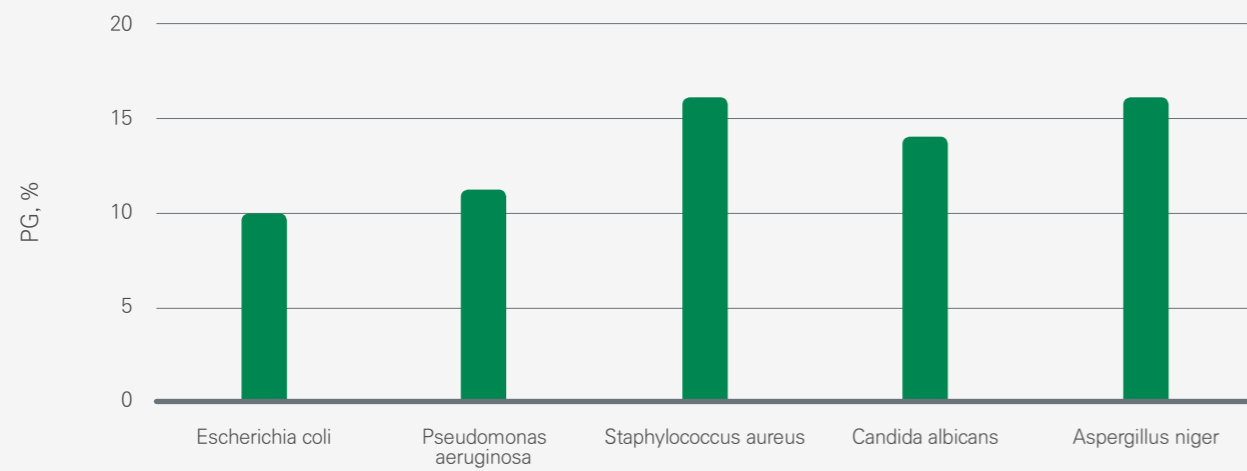
PG USP storage requirements

- In a single-stage load at 40 degrees or less
- No direct sunlight or UV
- After opening, keep the lid closed
- When storing in a tank, nitrogen padding is recommended

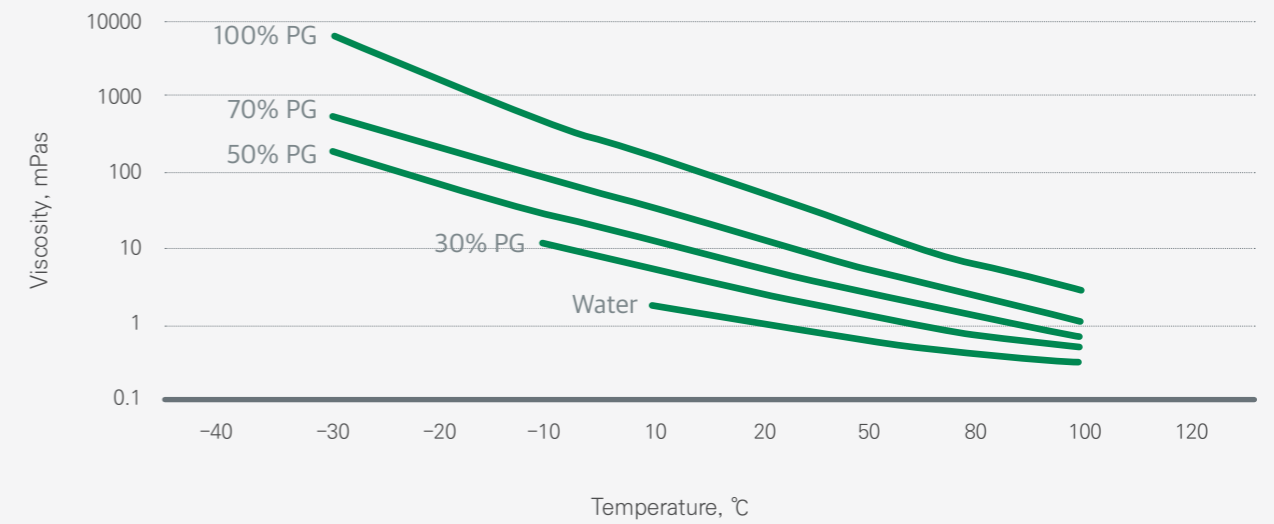
Technical data

Item	Test method	Unit	Data	
Chemical name			1,2-Propanediol	
Formula			C ₃ H ₈ O ₂	
Molecular weight		g/mol	76.10	
CAS No.			57-55-6	
EC(EINECS) No.			200-338-0	
Surface tension	25°C	ISO 304	mN/m	36
Refractive index	20°C	ASTM D1218		1.4310-1.4330
Viscosity	25°C 60°C	ASTM D2849	mPas (cPs)	48.6 8.4
Specific gravity	20/20°C 25/4°C 60/4°C	ASTM D4052		1.038 1.033 1.007
Vapor pressure	20°C 25°C	ASTM D5482	kPa	0.011 0.017
Specific heat	25°C	ASTM E202	J/g·K	2.51
Heat of formation		ASTM D240	kJ/mol	-422
Heat of vaporization	25°C	ASTM E1719	kJ/mol	67.0
Flash point	Open cup	PMCC	°C	104
Autoignition temp		ASTM E659	°C	371
Distillation range	1 atm	ASTM D1078	°C	186-189
Freezing point		ASTM D2386	°C	-59
Pour point		ASTM D97	°C	-57
Thermal conductivity	25°C	ASTM D2717	W/m·K	0.2061
Electrical conductivity	25°C	ASTM D4308	micro S/m	10

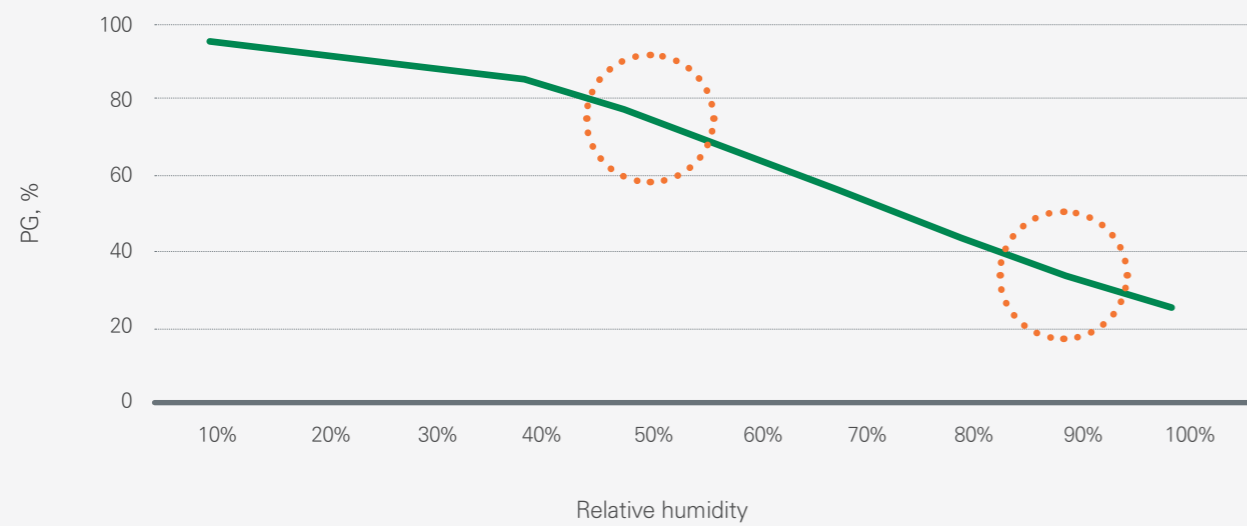
MIC (Minimum inhibitory concentration)



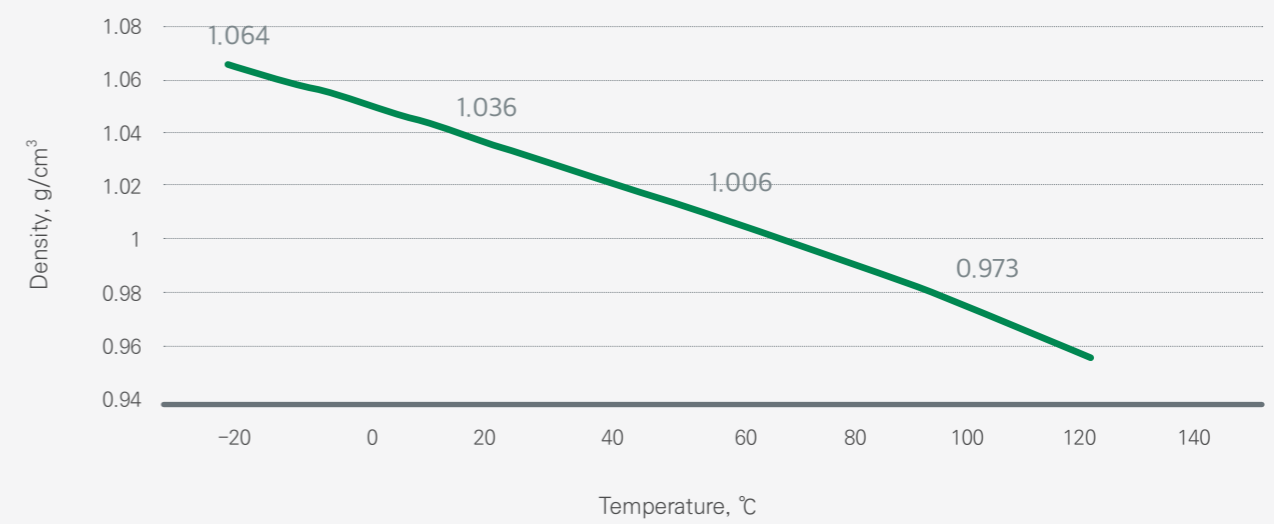
Viscosity of aqueous solution



Moisture retention concentration



Density by temperature



※ An aqueous solution containing 80% or more PG does not evaporate moisture even at a relative humidity of 50% or less. In an environment with a relative humidity of 90%, moisture retention is maintained even if only 40% of the PG is included



Additional information is available from your SK picglobal representative, our website, or by calling

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