Applechem Formulary - Sunscreens



Sugary Satin Oil-Free Daily Wear SPF 30, Broad Spectrum (SU-OW 018N-C)

PEG-Free, oil-free daily wear sun protection that is light enough for the face and moisturizing enough for the body. Features fantastic sheer-thinning sensory, transparency, and acts as a stable, easyto-process chassis for your favorite hero ingredients. Sensogel's SPE Complex technology dramatically boosts the hydrating and conditioning power of polyols like sorbitol while simultaneously increasing stability and viscosity.

SENSOGEL NOVUS is a very powerful polyol thickener which is used to great effect in this formula. Not only does it boost the viscosity of polylols like glycerin from a soft liquid into a structured gel, but also tamps down on the traditional stickiness associated with these types of ingredients.

Specifications

- 🍯 SPF: 30
- Viscosity @ 10 rpm: 31,800 cP
- 🍎 рН: 7.5
- 50°C oven: 1 month stable
- Freeze-Thaw: Passed 3 Cycles

PHASE	INCI NAME (TRADE NAME)	USAGE (WT%)
A	Distilled Water	69.70
	Erythritol	2.00
	Sorbitol	2.00
	Preservative	0.50
В	Avobenzone	2.00
	Octocrylene	10.00
	Octisalate	5.00
	Isohexadecane	5.00
С	Polyglyceryl-10 Mono/Dioleate (Caprol PGE 860)	0.80
	Glyceryl Behenate (Compritol 888 CG)	0.50
	Sensogel Novus	2.50
D	Fragrance	Q.S.

Processing Method

- 1. Mix Phase A with a propeller mixer for 5 minutes at room temperature until erythritol and sorbital are fully dissolved.
- 2. Mix and heat Phase B in seperate vessel at 500 rpm for 15-20 minutes with a dispersion blade at 70 Celsius.
- 3. Add Phase C into Phase B until homogenous at 70 Celsius.
- 4. Then move Phase BC to Silverson homogenizer. Add Phase A into Phase BC when homogenizing at 4000-4500 rpm for 5 minutes without continous heating.
- 5. Switch to propeller mixing while cooling down to room temperature. Add back water that may have evaporated during processing.
- 6. Add Phase D when formulation is at 30 Celcius.

