Applechem Formulary - Sun Care

Advanced InvisiGlide Sunscreen Stick, SPF 50 (SunS-003)

A dramatic improvement over old sunscreen stick technology, this formulation glides on smoothly and transparently with none of the traditional waxy, whitening residue. This stick features strong stability and efficient broad spectrum protection, requiring 25% Zinc Oxide actives to achieve SPF50.

G-GEL CCT-200 is an organoclay gel designed for clean beauty and silicone free applications. It reduces drag and tackiness from wax and film formers. G-Gel technology greatly boosts suspension and sensory of mineral pigments, making it a crucial ingredient in stabilizing mineral sunscreens.

OleoFLEX are film forming elastomeric texturizers for natural oils. They increase water resistance and lock the UV actives and natural oils onto the skin.

G-Block products are COSMOS, NPA approved, high active mineral UV filter dispersions which give predictable SPF and broad-spectrum benefits. Their excellent spreadability simplifies formulation development and the manufacturing process.

Specifications

- SPF:50; FDA protocol, 2 subjects
- CW: 370 nm, Broad Spectrum
- 50°C oven: 1 month stable
- Freeze-Thaw: Passed 3 Cycles

PHASE	INCI NAME (TRADE NAME)	USAGE (WT%)
A ₁	G-Block DZ 370 CCT	35.7
	G-Gel CCT 200	5.00
A ₂	Shea Butter	6.00
	Isostearyl Isostearate	7.75
	Cocos Nucifera (Coconut) Oil	5.00
В	OleoFlex FG 100	8.50
	OleoFlex EG 200	4.00
	Polyethylene (Performalene 400)	2.75
	Euphorbia Cerifera (Candelilla) Wax	2.75
	Ozokerite wax	7.30
	Microcrystalline Wax	5.00
	Beeswax	2.75
С	Preservative	0.50
	Isododecane	7.00
D	Fragrance	Q.S.

Processing Method

- 1. Mix Phase A_1 with a dispersion blade until uniform paste at room temperature (800 rpm). Add Phase A_2 with a propeller at 90 Celsius for 5 minutes.
- 2. Add Phase B with a propeller at 90 Celsius for 10 minutes. Reduce temperature to 80 Celsius. Then add Phase C and mix for 1 2 minutes.
- 3. Add Phase D and mix for 1 minute.
- 4. Pour into hot mold and allow it to solidify.



