## Applechem Formulary - Color Cosmetics

PHA

A

A,

B

C



## Color Control Air Cushion Compact Broad Spectrum SPF 50 (CC-F 0010 V4)

The innovative multi-functional compact made famous by Amore Pacific. The original Amore Pacific formulation was made possible by the inclusion of Applecare A-100 (1st generation), as it helped transform a thick CC cream into a light, silky, flowable product. This updated version features a number of newer Applechem technologies to help increase hydration and formulation stability.

Applecare PDS 300 is a natural super dispersant that greatly reduces tacky after- feel while reducing viscosity down to a low enough level for filling the compact sponge.

**G-GEL 102-V** is a strong, silicone-based bentonite gel. It enhances thermal stability and oil thickening which helps suspend water droplets, silcone components and powders. It creates a shear-thinning viscosity profile which boosts slip during application.

**PhytoCare** is a magic hydration powerhouse active which forms a moisture- restoring flexible film to hydrate and repair the skin, thus rebuilding skin elasticity.

To make a stable low viscosity W/S emulsion:

- 1. G-GEL 102V for its suspending power
- 2. Choose the right W/S emulsifier
- 3. Adjust the % of water and oil phases

## Specifications

- Low viscosity silky W/S liquid foundation in compact sponge packaging
- SPF 50+, Broad Spectrum
- 🍎 🛛 Yield Stress: 983,800 cP
- Viscosity @ 5 rpm: 10,640 cP
- 50°C oven: 1 month stable
- Freeze-Thaw: Passed 3 cycles

SE	INCINAME (TRADE NAME)	USAGE (WT%)
1	Distilled Water	30.3
	Sodium Chloride, NaCl	0.80
	Preservative	0.30
2	Butylene Glycol	4.00
	Snow Mushroom Extract (PhytoCare-HA CG 1M)	0.10
•	Isononyl Isononoate	3.00
	Butylene Glycol Dicaprylate/Dicaprate	4.00
	Octyl Methoxycinnamate	7.00
	G-Gel 102V	5.00
	Applecare A-100/ Applecare PDS 300	1.72
	Acrylates/Ethylhexyl Acrylate/Dimethicone Methacrylate Copolymer (KP-578)	0.74
	UV Grade Zinc Oxide (Zano 10, Umicore)	9.00
	UV Grade TiO2 (STR-100C-LF, Kowa American Corp)	3.00
	Pigment Grade TiO2 (PF 671, Ishihara Corp)	6.25
	Yellow Iron Oxide (non-surface treated)	1.46
	Red Iron Oxide (non-surface treated)	0.62
	Black Iron Oxide (non-surface treated)	0.18
;	PEG-10 Dimethicone (KF-6017, Shin-Etsu)	2.00
	Lauryl PEG-9 Polydimethylsiloxyethyl Dimethicone (KF-6038, Shin-Etsu)	3.50

## **Processing Method**

- 1. Premix Phase A2 as a slurry, then add to Phase A1.
- 2. Homogenize Phase B with Silverson Homogenizer for 20-30 minutes at 4000 rpm.
- 3. Mix and add Phase C into Phase B while mixing with Silverson. Then add Phase D and mix for 5 minutes.
- 4. Mix Phase BCD with a dispersion blade at 1000-1200 rpm at RT. Slowly add Phase A while raising the mixing speed to 1800 rpm.
- 5. Continue mixing for 10 minutes. Add fragrance if desired.

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