Applechem Formulary - Super Hybrids



Fake-cation GlowScreen Liquid Bronzer, SPF 30, Broad Spectrum (CC-F 022)

| PHASE | INCI NAME (TRADE NAME) | USAGE (WT%) |
|-----------------------|--|-------------|
| A 1 | Zinc Oxide (and) Coco- Caprylate/Caprate (and) Polyhydroxystearic Acid (and) Polyglyceryl-3 Polyricinoleate (and) Triethoxycaprylylsilane (and) Lecithin (S-Block DZ CocoDerm) | 27.00 |
| | C15-19 Alkane (and) Quaternium-90 Bentonite (and) Triethyl Citrate (G-Gel Silkane) | 5.50 |
| | Caprylyl Methicone | 4.00 |
| A ₂ | Mica (and) Bismuth Oxychloride (and) Iron Oxides (chroma-Lite Yellow) | 4.75 |
| | Mica (and) Bismuth Oxychloride (and) Iron Oxides (Chroma-Lite Brown) | 2.25 |
| | Mica (and) Bismuth Oxychloride (and) Iron Oxides (Chroma-Lite Black) | 0.75 |
| | Coco Caprylate/Caprate | 4.95 |
| | Polyhydroxystearic acid (and) Caprylic/Capric Triglyceride (and) Isostearic Acid (and) Lecithin (and) Polyglyceryl-3 Polyricinoleate (Applecare PDS 300) | 0.70 |
| В | Water | 20.0 |
| | Alpha-glucan oligosaccharide (and) Polymnia sonchifolia root juice (and) Maltodextrin (and) Lactobacillus (Ecoskin®) | 3.00 |
| | Propanediol | 3.00 |
| | Glycerin | 2.00 |
| | Sodium Chloride | 1.00 |
| | Preservative | 0.50 |
| C ₁ | Cetyl PEG/PPG-10/1 dimethicone and hexyl lautrate and Polygluceryl-4 isostearate (Gransurf w9) | 2.00 |
| | Dimethicone (and) Polysilicone-11 (Gransil DMG-3) | 6.00 |
| | PEG-10 dimethicone (Gransurf 67) | 5.00 |
| C ₂ | Dimethicone (2 cSt) | 4.40 |
| | Silica Silyate (Dowsil Vm-2270 Aerogel Fine Particles) | 0.20 |
| D | Fragrance | Q.S |
| | Biosaccharide gum-4 (and) 1,2-hexanediol (Pollustop®) | 1.00 |
| | Mica (and) C.I. 77499 (and) C.I. 77491 (and) C.I. 77891 (Colorona Aborigine Amber) | 2.00 |

Processing Method:

- 1. Mix Phase A2 with a dispersion blade mixer at 70C for 20 minutes (until homogenous).
- 2. In a seperated vessel, mix Phase A1 (main vessel) with a dispersion blade at room temperature.
- 3. Premix Phase B in a seperate vessel and mix until all homogenous and dissolved,
- 4. Add Phase A2 to Phase A1 and dispersion mix for 500 RPM until it is completely homogenous.
- 5. Add Phase C1 to A and dispersion mix for 500 RPM until it is completely homogenous.
- 6. Premix Phaze C2 into a slurry. While homogenizing (4000-4500 RPM) slowly add Phase C2 to the mix.
- 7. Add Phase B while dispersion mixing at 500-800 RPM. Continue mixing for 5 minutes.
- 8. Add Phase D at <40C and paddle mix at 300 RPM. Slowly add the pigment. Continue mixing for 5 minutes after all pigment is added.

Specifications

- Viscosity @ 10 RPM: 27,240 cP
- SPF: 30, FDA protocol, 1 subject
- OW: 370 nm, Broad Spectrum
- Freeze-Thaw: Passed 3 Cycles

EDITION: DEC 2023 REF: CTSPF 2308-5



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About The Prototype

Benchmark Products: Charlotte Tillbury Flawless Filter; Drunk Elephant Bronzing Drops

Get ready to achieve a stunning, sun-kissed look while keeping your skin healthy and protected with our Fake-cation GlowScreen. This bronzing product doesn't just enhance your glow; it hydrates your skin, providing a burst of moisture to keep you looking luminous all day.

Formulator Focus

The combination of S-Block DZ CocoDerm, G-Gel Silkane, and Applecare PDS-300 creates an ultra-stable mineral SPF platform with a silky-smooth, silicone-like application. This provides a pH compatible environment for microbiome-friendly polysaccharides like Ecoskin[®] and Pollustop[®], which in turn helps maximize their skin wellness and restoration benefits.

Ingredient Highlights

ECOSKIN®

is a vegan pre/postbiotic complex for radiant skin. The unique combination of polysaccharides and probiotics rebalances the skin's microbial barrier by regenerating the cutaneous surface, helping it achieve a healthy, hydrated equilibrium. This active is made from glucooligosaccharides obtained by enzymatic synthesis from vegetable substrates, a 100% vegetable juice obtained from Yacon tubers and inactivated Lactobacillius probiotic bacteria.

POLLUSTOP®

is a high molecular weight polysaccharide designed to stop external skin irritants in their tracks. It forms a powerful matrix on your skin to provide barrier protection from UV, environmental, and domestic pollution.

S-BLOCK DZ COCODERM

is the new generation of sensory UV-grade mineral dispersions designed for modern high performance sun care. It features a high slip sensory during application with a medium moisturizing after-feel. It is non-nano, has an enhanced active loading of 78%, and gives predictable SPF and broad-spectrum benefits. Its excellent multi-system compatibility simplifies both formulation development and the manufacturing process.

G-GEL SILKANE

is an organoclay gel designed to deliver high end silicone sensory in silicone-free formulations. It greatly boosts suspension and slip of color pigments, making it a crucial ingredient in stabilizing color cosmetics with mineral actives.

Applecare PDS-300

is widely known for its use in wetting and dispersing traditional pigments. In this formulation it is used to disperse specialty and pearlescent pigments therefore allowing for the development of a consistent brilliant shine.