

Water Resistant Sunscreen with Koboguard® 5400

Formula KSL-114

IDD

Kobo Products - formulations

Part	Percent	Ingredients	INCI Name	Supplier
1	14.29	KOBOGUARD® 5400 IDD	Hydrogenated Polycyclopentadiene (And) Isododecane	Kobo Products
	0.35	Permethyl® 99A	Isododecane	Presperse
2	2.00	LUCENTITE SAN-P	Quaternium-18 Hectorite	Kobo Products
	0.66	Phenoxyethanol	Phenoxyethanol	Clariant
3	30.00	PM9P50M170	Titanium Dioxide (And) Isododecane (And) Alumina (And) Methicone (And) Polyhydroxystearic Acid	Kobo Products
	6.80	SF1540	Cyclopentasiloxane (And) PEG/PPG-20/15 Dimethicone	Momentive/Kobo Products
	3.38	TOSPEARL 2000B	Polymethylsilsesquioxane	Momentive/Kobo Products
	0.25	Covi-ox® T-70	Tocopherol	Cognis Corp.
4	0.75	Crill 6	Sorbitan Isostearate	Croda
	0.75	Arlacel 80	Sorbitan Oleate	Croda
	0.10	Propyl Paraben NF	Propylparaben	International Sourcing
5	17.70	Deionized Water	Water	
	1.00	Sodium Chloride	Sodium Chloride	Morton Salt
	0.10	Methyl Paraben NF	Methylparaben	International Sourcing
6	1.65	Syncrowax HGL-C	C18-36 Triglycerides	Croda
	1.10	Syncrowax BB-4	Synthetic Beeswax	Croda
	0.10	Vitamin E Acetate	dl-alpha Tocopherol	Roche
7	17.70	VELVESIL 125	Cyclopentasiloxane (And) C30-45 Alkyl Cetearyl Dimethicone Crosspolymer	Momentive/Kobo Products
8	0.02	Vanillin FCC	Vanillin	Citris & Allied Essence
9	1.00	Deionized Water	Water	
	0.30	dl-Panthenol	Panthenol	Roche

100

Manufacturing Procedure

Use explosion-proof mixers and equipment during batching process

- Combine Part 1 materials. Add the Lucentite SAN-P slowly to Part 1. Stir with a Cowles Dissolver in a stainless steel beaker at high speed for 20 minutes. Add the Phenoxyethanol and stir an additional 20 minutes.
- Combine all the Part 3 ingredients in a stainless steel beaker and stir at high speed with a Cowles Dissolver for 30 minutes. Add gel Parts 1 and 2 to Part 3 to form the base.
- Add Part 4 ingredients to the base and homogenize for 15 minutes.
- Combine aqueous Part 5 ingredients and stir until clear.
- Add Part 5 slowly to the base and continue homogenizing while heating to 75°C.
- Add the waxes (Part 6) to the base and continue to homogenize. Begin air cooling.
- At 70 °C add the Velvesil and QS solvent loss.
- Add Part 8 (Vanillin) to the main batch at 55°C.
- At 42°C add the Panthenol solution. Continue homogenizing and cool until 25°C. Fill into appropriate containers.

Description

This W/O sunscreen includes Koboguard® 5400 IDD, which helps to provide both rub and water-resistance, contributing to long-lasting protection of the sunscreen. PM9P50M170, Kobo's Titanium Dioxide Dispersion, provides transparency and contributes to the high SPF. Lucentite SAN-P gives thickening and stabilizes the emulsion. Tospearl 2000B gives excellent slip and feel on application. SF1540 is an excellent W/O emulsifier. Velvesil 125 is a silicone elastomer which provides a lubricious application and afterfeel.

Notes

Active Ingredient(s)	Percentage
Titanium Dioxide	12.00%

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Formulations

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The Powder & Dispersion Specialist

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