



Emulsified Stick Foundation <Stick> ESF2-11

Dec, 2021

An emulsified stick foundation hard to transfer to face masks.

The formulation is based on **GP-1**, **EB-21** and has a light touch.

	Trade name	INCI Name	wt %	Function
A	GP-1	Dibutyl Lauroyl Glutamide	2.1	Gelling agent
	EB-21	Dibutyl Ethylhexanoyl Glutamide	1.4	Gelling agent
	RISONOL 20SP *1	Octyldodecanol	17	Emollient
	Rheoppearl KL2 *2	Dextrin Palmitate	1	Gelling agent
	Rheoppearl TT2 *3	Dextrin Palmitate/Ethylhexanoate	1	Gelling agent
B	KF-56A *4	Diphenylsiloxy Phenyl Trimethicone	1	Emollient
	KF-96L-1.5CS *5	Dimethicone	6.5	Solvent
	ELDEW™ PS-203R	Phytosteryl/Octyldodecyl Lauroyl Glutamate	0.5	Emollient
	KF-6048 *6	Cetyl PEG/PPG-10/1 Dimethicone	3	Emulsifier
	NIKKOL sugar squalane *7	Squalane	3	Emollient
	FLORAMAC 10 *8	Ethyl Macadamiate, Tocopherol, Malic Acid	3	Emollient
	AMIHOPE™ LL	Lauroyl Lysine	0.3	Sensory modifier
C	SUNSPHERE NP-30 *9	Silica	4	Sensory modifier
	OTS-2 TiO2 CR-50 *10	Titanium Dioxide, Triethoxycaprylylsilane	11.8	Pigment
	OTS-2 YELLOW LL-100P *11	Iron Oxide (Yellow), Triethoxycaprylylsilane	1.8	Pigment
	OTS-2 RED R-516P *12	Iron Oxide (RED), Triethoxycaprylylsilane	0.3	Pigment
	OTS-2 BLACK BL-100P *13	Iron Oxide (Black), Triethoxycaprylylsilane	0.2	Pigment
	KF-96L-1.5CS *6	Dimethicone	3.5	Solvent
D	COSMOL 43V *14	Polyglyceryl-2 Triisostearate	2.4	Emollient
	Pentylene Glycol	Pentylene Glycol	2	Moisturizer
	XANTHAN GUM	Xanthan Gum	0.02	Thickener
	PHENOXETHANOL	Phenoxethanol	0.5	Preservative
	WATER	Aqua	Up to 100	Solvent
E	GLYCERIN	Glycerin	2	Moisturizer
	PRODEW™ 700 (50%)	Sodium PCA, Sodium Polyaspartate, Butylene Glycol, Betaine, Zinc PCA, Sodium Citrate, Arginine, Serine, Lysine HCl, Glutamic Acid, Water	2	Skin conditioning, Moisturizer, Sebum control, Adhesion improver
Total			100.00	

*1 Kokyu Alcohol Kogyo, *2,3 Chiba Flour Milling, *4-6 Shinetsu, *7 NIKKOL, *8 FLORATECH, *9 AGC, *10-13 Daito Kasei Kogyo, *14 Nisshin Oilio

<PROCEDURE>

- Mix and disperse A part at R.T., and then heat it to 110-120 °C with stirring until gelling agents are dissolved completely.
- Mix B part and stir at R.T.
- Disperse C part with a roller mill 3 times.
- Add C part into B part and stir them at 90 °C.
- Add BC part into A part and stir them at 95 °C.
- Mix and disperse D part aside from water at R.T., and then add water with stirring. Stir them at R.T. until Xanthan Gum is dissolved completely.
- Add E part into D part, and then heat it to 90 °C with stirring.
- While mixing ABC part with the homogenizing mixer(5000rpm), gradually add DE part into ABC part, and then mix the final mixture with homogenizing mixer for 3 min, at 5000rpm.
- Defoam the bulk and pour it into stick containers at 65 °C and then cool it down at R.T.

<PHYSICAL PROPERTIES and STABILITY>

Appearance: Stick (Beige)

Recommended container: Sealed direct-fill stick containers only

Hardness: 115g (Rheometer FUDOH RT-3002D, Range: 200g, Adaptor: 3mm φ, Speed: 6cm/min, Depth:15mm, 25°C, 30ml ointment jar)

Stability: -5°C, 5°C, 25°C, 40°C, 50°C, Cycle for 1month

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