

Zinc oxide sunscreen lotion with Eastman AQ™ 38S polymer and Eastman Sustane™ SAIB MCT

Part	Product name	Wt%	Ingredient/INCI name	Manufacturer
A	Deionized water	42.40	Water (aqua)	—
	Zemea®	2.00	Propanediol	DuPont Tate & Lyle
	Glycerin	2.00	Glycerin	Dow
	AMPHISOL® K	2.00	Potassium cetyl phosphate	DSM
	SAFIC® CARE T XGC 80	0.20	Xanthan gum	Safic-Alcan
	CELLOSIZETM hydroxyethyl cellulose (HEC)	0.40	Hydroxyethylcellulose	Dow
	Dermofeel® PA-1	0.10	Sodium phytate	Evonik-Dr. Straetmans
B	Eastman AQ™ 38S polymer (30% solution)	10.00	Polyester-5	Eastman
C	Crodamol™ AB	4.00	C12-15 alkyl benzoate	Croda
	SOFTISAN® 378	1.00	Caprylic/capric/myristic/stearic triglyceride	IOI Oleo
	Lipocol™ SC-20	1.50	Ceteareth-20	Vantage
	Lipocol™ SC-1618	3.00	Cetearyl alcohol	Vantage
	Covi-Ox® T 50	0.50	Tocopherol	BASF
	TEGOSOFT® DCE	1.50	Diethylhexyl carbonate	Evonik Industries
	Cetiol® SN	2.00	Cetearyl isononanoate	BASF
	Cutina® GMS-SE	1.50	Glyceryl stearate SE	BASF
	Eastman Sustane™ SAIB MCT	1.00	Sucrose acetate isobutyrate (and) caprylic/capric triglyceride	Eastman
	Tinogard® TT	0.10	Pentaerythrityl tetra-di-t-butyl hydroxyhydrocinnamate	BASF
	PARSOL® 340	6.00	Octocrylene	DSM
PARSOL® MCX	5.00	Ethylhexyl methoxycinnamate	DSM	
D	AEROSIL® 300	1.00	Silica	Evonik Industries
	Zinc oxide (micronized)	12.00	Zinc oxide	—
E	KEM DIOL	0.80	Phenoxyethanol (and) caprylyl glycol	Akema

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PROCEDURE

1. Weigh out part A into a clean, sanitized stainless steel vessel, and heat it to 80°–85°C.
2. Once at temperature, incorporate xanthan gum and hydroxyethylcellulose. Make sure that part A is completely dispersed before moving on to the next step.
3. Weigh out part C into a clean, sanitized stainless steel vessel, and heat it to 70°–75°C.
4. Once all part A is completely dissolved into the main vessel, add part C and increase the speed.
5. Once homogeneous, keep the temperature and incorporate part B. Mix until homogeneous.
6. Once homogeneous, incorporate part D and increase speed to 1200–1500 rpm.
7. Once homogeneous, start cooling down. Once < 50°C, incorporate part E.
8. Adjust pH* if required.

*pH @ 25°C: 5.5–6.0

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