

Refreshing Sunscreen Stick

Formula # 2/24-10089/358-1

Features

- Structured Water-In-Oil Sunscreen Emulsion.
- Mineral Sunscreen Only, Reef Safe, Non-Nano.
- Light and Slick, Spreads Easily, Non-Whitening.

Skin Care

Emulsion

Traditional Ingredients

Sunscreen

Formula

Synkos O-1070

Synthetic wax that increases melt point and provides hard structure in anhydrous formulas, mimics the properties of medium melt ozokerites. Economical, versatile structurant. BHT free.

Kester Wax K-24

Naturally derived wax ester of plant origin. Low melt point semi-solid, melts on body contact, provides cooling sensation. Adds slip, reduces greasy feel, dimethicone alternative. Usage level up to 50%.

Kostol PGP

Non-ionic o/w emulsifier or w/o co-emulsifier. Provides a light feel, without affecting viscosity. Designed for multiple formula types, wide pH tolerance. Usage level 2-6%.

Trade Name	INCI Name	%
<i>Phase A</i>		
Synkos O-1070¹	Synthetic Wax	15.0
Kester Wax K-24¹	Lauryl Laurate	3.0
Purolan IHD ²	Isohexadecane	10.0
Jeechem IPM ³	Isopropyl Myristate	3.0
UV Cut ZnO-68-CG ⁴	Zinc Oxide, Caprylic/Capric Triglyceride, Polyhydroxystearic Acid	36.8
Abil EM 180 ⁵	Cetyl PEG/PPG-10/1 Dimethicone	1.5
Kostol PGP¹	Polyglyceryl-3 Stearate, Beheneth-5	2.0
<i>Phase B</i>		
Deionized Water	Aqua	23.6
Optiphen ⁶	Phenoxyethanol, Caprylyl Glycol	0.5
Jeechem BUGL ³	Butylene Glycol	3.0
Sodium Chloride	Sodium Chloride	0.8
Magnesium Sulfate	Magnesium Sulfate	0.8

Procedure

- Combine Phase A ingredients and mix well, while heating to 85 -90 °C. Homogenize, if necessary, to ensure ZnO is well dispersed.
- Combine Phase B ingredients and heat to 85 - 90 °C.
- Once both Phases are at temperature, add Phase B to Phase A and shear at high speed.
- Cool with propeller mixing to 70 - 75 °C and fill containers, continue agitation throughout filling.
- Allow to cool undisturbed.

Stability Information:

Three months at 45 °C, three months at room temperature, three freeze/thaw cycles.

Supplier Information:

1. **Koster Keunen, Inc.;** 2. Lanxess; 3. Jeen; 4. Grant Inc.; 5. Evonik;
6. Brenntag Specialties.

Looking for additional formulas? Try our Formula Selector Tool at: kosterkeunen.com/pcformulationguide