

REPLENISHING CLEAR SUN STICK

PRODUCT FORMULARY

A clear sun stick with a predicted SPF of 30. This easy-to-use stick format has excellent payoff and spreadability. Developed with a unique multi-functional polymer that allows the formulation of clear sticks, this formula contains a photo-stabilizing antioxidant to protect the skin during and after sun exposure.

Mixing instruction and process:

1. Prepare phase A and heat to 85 °C to obtain a clear, homogeneous liquid.
2. Cool to 70 °C and add phase B one by one in this order by homogenizing with moderate stirring between each addition.
3. Then add phase C and homogenize. Pour into the sticks at around 70 °C.

Formulation:

Phase	Ingredient	INCI	W/W%
A	Versastique™ Low Melt SQ 5T	Squalane, Butyl Stearate, Isostearyl Alcohol, Hydrogenated Styrene/Butadiene Copolymer, Dibutyl Ethylhexanoyl Glutamide, Dibutyl Lauroyl Glutamide, Pentaerythrityl Tetra-di-t-butyl Hydroxyhydrocinnamate	71.40
B	Squalane, Butyl Stearate, Isostearyl Alcohol, Hydrogenated Styrene/Butadiene Copolymer	Octocrylene	10.00
B	Octocrylene	Ethylhexyl Salicylate	5.00
B	Ethylhexyl Salicylate	Butyl Methoxydibenzoylmethane	5.00
B	Butyl Methoxydibenzoylmethane	Ethylhexyl Methoxycinnamate	4.00
C	Ethylhexyl Methoxycinnamate	Ethyl Oleate	2.00
C	Ethyl Oleate	Haematococcus Pluvialis Extract, Caprylic / Capric Triglyceride, Tocopherol	0.0014
C	Haematococcus Pluvialis Extract, Caprylic / Capric Triglyceride, Tocopherol	Bis-Ethylhexyl Hydroxydimethoxy Benzylmalonate	1.00
C	Bis-Ethylhexyl Hydroxydimethoxy Benzylmalonate	Bisabolol	0.50
C	Bisabolol	Dihydroxy Methylchromonyl Palmitate	0.10
C	Dihydroxy Methylchromonyl Palmitate	Caprylyl Glyceryl Ether	0.50
D	Caprylyl Glyceryl Ether	Parfum	0.50

Physicochemical Index

Appearance: Clear Light Orange Stick
 Odor: Almond
 Stability: 3 months @ 4, RT, 40 °C

*Product listed in **bold** is supplied by Calumet, Inc..

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