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Clear Anti-aging Sunscreen Stick

Phase	Trade Name	Supplier	INCI	% w/w
1	Versastique Clear SQ 5T	Penreco	Squalane, Butyl Stearate, Isostearyl Alcohol, Hydrogenated Styrene/Butadiene Copolymer, Octyl Dodecanol, Dibutyl Lauroyl Glutamide, Dibutyl Ethylhexanoyl Glutamide, Pentaerythrityl Tetra-Di-t-Butyl Hydroxyhydrocinnamate	78.00
2	Parsol 1789	DSM	Butyl Methoxydibenzoylmethane	3.00
2	Parsol HMS	DSM	Homosalate	10.00
2	Parsol EHS	DSM	Ethylhexyl Salicylate	5.00
2	Parsol 340	DSM	Octocrylene	4.00

^{*} This formulation is for experimental use only. User assumes all risks.

MAKING PROCEDURE:

Heat Phase 1 until completely dissolved (120 - 130 °C). Start stirring and allow to cool to 115 °C. Add Avobenzone and stir until dissolved. Add the rest of Phase 2 ingredients sequentially with continued stirring. Continue stirring at 115 °C for 1 hour. Pour into desired packaging.

Results:

In-vitro SPF performance of mineral sunscreen sticks

63	69	0.93
Static SPF	Post-immersion SPF	UVA/UVB rati

Formulation developed by Calumet Refining, LLC, which is a wholly owned subsidiary of Calumet Specialty Products Partners, L.P. For questions regarding formulations, contact penreco@clmt.com.

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