

Water-in-Oil Sunscreen Cream In-Vivo SPF 34
ARL-20-18-8

Ingredient	INCI	Supplier	%W/W
PHASE A			
Escalol 587	Ethylhexyl Salicylate	Ashland	3.00
Escalol 557	Octinoxate	Ashland	7.00
PELEMOL® 6GPR	Polyglyceryl-6 Polyricinoleate	PHOENIX CHEMICAL, INC.	3.00
PELEMOL® BIP-PC	Butylphthalimide (and) Isopropylphthalimide	PHOENIX CHEMICAL, INC.	10.00
Parsol TX	Titanium Dioxide (and) Silica (and) Dimethicone	DSM Nutritional Products	4.00
ZNO-USP1-11S3	Zinc Oxide (And) Triethoxycaprylylsilane	Kobo Products	15.00
PHASE B			
PECOSIL® AS-16	Cetyl Dimethicone	PHOENIX CHEMICAL, INC.	1.00
PECOSIL® AS-18	Stearyl Dimethicone	PHOENIX CHEMICAL, INC.	1.00
PELEMOL® D5R-V	Propanediol Dicaprylate/Caprate (and) Diisostearyl Malate	PHOENIX CHEMICAL, INC.	5.50
PELEMOL® P-1263	Polyglyceryl-10 Hexaoleate (and) Polyglyceryl -6 Polyricinoleate	PHOENIX CHEMICAL, INC.	5.00
Ceresin Wax 140/150	Ceresin	Koster Keunen	1.00
PHASE C			
Deionized Water (Water)			42.95
Versene 220 Crystals	Tetrasodium EDTA	Dow Chemical	0.05
Propylene Glycol USP	Propylene Glycol	Univar Solutions	1.00
Sodium Chloride	Sodium Chloride		0.50
Preservative			q.s.
TOTAL			100.00

PROCEDURE:

In main vessel, combine Phase A ingredients and homogenize until pigments are uniformly dispersed and batch is homogeneous. Switch to prop mixer, add Phase B ingredients and begin heating to 80°- 85°C, mixing at moderate speed until uniform.

In a separate beaker, combine Phase C ingredients and begin heating to 80°- 85°C, mixing at moderate speed until uniform.

When both Phase A/B and Phase C are at 80°- 85°C, SLOWLY add Phase C to Phase A/B. Continue mixing at moderate speed for 15 minutes until emulsion is formed. Continue mixing and begin cooling batch. Cool batch to room temperature.

Ingredient	Function
Pelemol® 6GPR	Aids in pigment wetting
Pelemol® BIP-PC	Sunscreen active solublizer
Pecosil® AS-16	Liquid hydrophobic silicone wax. Adds water resistance
Pecosil® AS-18	Soft hydrophobic silicone wax. Adds water resistance
Pelemol® D5R-V	Provides slip and cushion. Aids in spreadability
Pelemol® P-1263	W/O emulsifier