

Development Formulation



C10158a

Sublime Protection Sun Lotion SPF 20

This oil in water sun lotion has a light skin feel and is completely clear on the skin. It contains **Crodamol™ ISIS** to provide excellent moisturising properties to the skin and **Crodamol SSA** to provide an elegant skin feel. It also uses **Solaveil™ CT-300** and **Solaveil CZ-300** to provide a natural, inorganic-only sun care formulation with SPF 20 protection, a UVAPF of at least one third of the SPF and a critical wavelength of at least 370nm.

Ingredient/INCI Name	Functionality	% w/w
Part A		
Deionised Water (Aqua)	-	To 100
Pricerine™ 9091 (Glycerin) ¹	Humectant	3.00
Citric Acid (50%w/w Solution)	pH Adjuster	2.00
Veegum Ultra (Magnesium Aluminum Silicate) ²	Thickener	1.00
Keltrol CG-SFT (Xanthan Gum) ³	Thickener	0.50
Titriplex III (Disodium EDTA) ⁴	Chelating agent	0.10
Part B		
NatraGem™ E145 (Polyglyceryl-4 Laurate/ Succinate (and) Aqua) ¹	O/W emulsifier	2.46
Span™ 20 (Sorbitan Laurate) ¹	O/W emulsifier	3.04
Crodamol ISIS (Isostearyl Isostearate) ¹	Moisturising emollient	2.00
Crodamol SSA (Decyl Isostearate (and) Isostearyl Isostearate) ¹	Non-greasy emollient	2.00
Crodamol GTCC (Caprylic/ Capric Triglyceride) ¹	Light emollient	2.00
Propylene Glycol	Improves ZnO distribution	3.00
Part C		
Solaveil CZ-300 (Zinc Oxide (and) Caprylic/ Capric Triglyceride (and) Polyhydroxystearic Acid (and) Isostearic Acid) ¹	Inorganic UVA filter	22.50
Solaveil CT-300 (Caprylic/ Capric Triglyceride (and) Titanium Dioxide (and) Polyhydroxystearic Acid (and) Aluminium Stearate (and) Alumina) ¹	Inorganic UVB filter	2.50
Part D		
Euxyl PE 9010 (Phenoxyethanol (and) Ethylhexylglycerin) ⁵	Preservative	0.70

Suppliers: 1: **Croda** 2: RT Vanderbilt 3: CP Kelco 4: Merck 5: Schülke

Procedure:

Premix the Keltrol CG SFT, Veegum Ultra and **Pricerine 9091** then add water with stirring. Once the gums are dispersed add the Titriplex III and then the citric acid solution with stirring. Combine Part B ingredients and stir until homogenous. Add Part C ingredients to Part B with stirring and stir until homogenous. Slowly add Part B+C to Part A with fast stirring. Mix with an Ultra-Turrax homogeniser for one minute per 100g at 10'000 rpm. Add Part D with stirring and stir until homogenous. Check pH is 6.5-7.5.

Appearance: White lotion; pH: 7.1 ± 0.5; Viscosity: 6,630cP ± 10% Brookfield, DV-I+, spindle 3, 10rpm, after 1min, Room Temperature
Stability: 3 months at 5°C, 25°C, 40°C, 45°C and 1 month x -5°C/+40°C 24 hour freeze-thaw cycle
In vitro SPF (Croda): 22, label SPF 20
In vitro UVAPF (Colipa 2011, Croda): 8
In vitro Critical Wavelength (FDA 2011, Croda): 370 nm

Veegum is a registered trademark of RT Vanderbilt
Keltrol is a registered trademark of CP Kelco

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Titriplex is a registered trademark of Merck
Euxyl is a registered trademark of Schülke

This formulation was developed in Europe. Contact your local sales representative with enquiries as ingredient availability can vary by region.

Non-warranty

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