

Formulation sheet

Broad-spectrum, water-resistant, SPF 25+ daily facial moisturizer

ACTS20131

Description

This elegant, light-feeling water-in-oil (W/O) formulation spreads well, covers evenly, and has built-in water resistance, enhanced by the use of two emollients with excellent barrier characteristics. Combining organic and inorganic sunscreen actives, along with placement of the actives in both the aqueous and emollient phases, allows for a high SPF with a relatively low level of active. The formula achieves protection beyond broad spectrum with a critical wavelength of 377.8nm. The success of the formulation is attributed to Zemea[®] propanediol keeping the water-soluble actives in solution through the evaporation process when the product is applied to the skin.

Phase	Ingredient	INCI name	Supplier	Function	Wt.%
A	Water	Water	_		52.40%
	Spectrastat™	Caprylhydroxamic acid (and) caprylyl glycol (and) glycerin	Inolex	Preservative	0.80%
	AquaSul	Sulisobenzone (benzophenone-4)	SandreamImpact	Active	2.00%
В	Zemea [®] propanediol	Propanediol	CovationBio PDO	Humectant	10.00%
	Parsol HS	Ensulizole	DSM	Active	3.00%
С	Tris Amino Ultra PC	Tromethamine	Angus	Neutralizer	2.20%
D	Solaveil™ XT-40	Titanium dioxide (and) aqua (and) polyglyceryl-2 caprate (and) sucrose stearate (and) simmondsia chinensis (jojoba) seed oil (and) stearic acid (and) alumina (and) glyceryl caprylate (and) squalane	Croda	Active	3.00%
E	KerrSoft AVG	Acetylated hydrogenated vegetable glyceride	Kerry	Emollient	15.00%
	KerrEmul PGPR	Polyglyceryl-3 polyricinoleate	Kerry	Emulsifier	2.50%
	Solaveil™ AT-300	Caprylic/capric triglyceride (and) titanium dioxide (and) polyhydroxystearic acid (and) stearic acid (and) alumina	Croda	Active	3.00%
	Xperse [®] 201	Zinc oxide, caprylic/capric triglyceride, polyhydroxystearic acid, triethoxycaprylylsilane	Umicore	Active	3.00%
	CosmoSurf® CE-100	Octododecyl citrate crosspolymer	SurfaTech	Emollient	3.00%
F	CAB-O-SIL° TS-610	Silica dimethyl silylate	Cabot	Thickener	0.10%
	Total				100.00%

Formula provided by: ACT Solutions Corp., Newark, Delaware, USA

Procedure

- 1. Premix Phase A. Add Phase B to Phase A.
- 2. Add Phase C until (AB) is clear.
- 3. Add Phase D to (ABC) while mixing with propeller stirring.
- 4. Premix Phase E.

- 5. Add (ABCD) to Phase E very slowly while mixing with propeller stirring.
- 6. Add Phase F while mixing with propeller stirring.

COVATIONBIO PDO

For additional information or samples, please contact Customer Service. 198 Blair Bend Drive, Loudon, TN 37774 | Tel: +1-866-404-7933 | CovationBioPDO.com

is a registered trademark of Primient Covation LLC for its brand of bio-based propanediol marketed under the name CovationBio" PDO. Copyright © 2023 Primient Covation LLC. All rights reserved. 2301-0256_3-8473 (3/23)

This technical product information is presented in good faith and is believed to be accurate and reliable as of the date of publication. Primient Covation LLC makes no guarantee or warranty of any kind, expressed or implied, regarding the product or information contained herein. Purchaser assumes all risk and liability in acting on the information provided herein. It is the sole responsibility of the Purchaser to determine whether Zemea^a propanediol is appropriate and suitable for the Purchaser's specific use and, as required, to obtain approval by appropriate regulatory authorities for such use. Statements concerning the use of Zemea^a propanediol are not to be construed as recommendations, suggestions, or inducements to use it in the infringement of any patent or in violation of any applicable laws or regulations. Primient Covation LLC disclaims any liability for infringement of any patent by reason of customer's use of any products or information contained herein in combination with other materials or in any process.