



## Oil-in-Water (O/W) Broad Spectrum Protection Daily Facial Moisturizer

**Description:** This versatile, light-feeling formulation uses Zemea® propanediol to maintain solubility and fluidity of the water-soluble ensulizole UVB absorber as the formulation water evaporates on the skin, and to provide moisturization benefits. The titanium dioxide dispersion offers transparency and attenuation throughout the UV spectra. The crosspolymer is included to give the O/W formulation water resistance. The glyceride emollient is a moisture barrier used in food applications.

Phase	Ingredient	INCI Name	Supplier	Function	Wt.%
A	Water	Water	-	-	48.50%
	Zemea® propanediol	Propanediol	DuPont Tate & Lyle Bio Products	Humectant	10.00%
	Parsol HS	Ensulizole	DSM	Active	4.00%
	Tris Amino Ultra PC	Tromethamine	Angus	Neutralizer	3.00%
	KerrPoly GA	Acacia Senegal Gum	Kerry	Thickener	1.50%
B	Solaveil™ AT-300	Caprylic/Capric Triglyceride (and) Titanium Dioxide (and) Polyhydroxystearic Acid (and) Stearic Acid (and) Alumina	Croda	Active	15.00%
	KerrSoft AVG	Acetylated Hydrogenated Vegetable Glyceride	Kerry	Emollient	10.00%
	KerrEmul GSSL	Glyceryl Stearate (and) Sodium Stearoyl Lactylate	Kerry	Emulsifier	5.00%
	CosmoSurf® CE-140	Octyldodecyl stearyl citrate polyester	SurfaTech	Emollient	2.00%
C	Spectrastat G2	Caprylhdroxamic Acid (and) Glyceryl Caprylate (and) Glycerin	Inolex	Preservative	1.00%
Total					100.00%

### Procedure:

1. Premix Zemea® propanediol and Acacia Gum
2. Mix phase A and heat to 50°C
3. Mix phase B and heat to 50°C.
4. Add phase B to phase A with propeller stirring.
5. Homogenize at 40°C.
6. Add phase C with propeller mixing when below 40°C.

Formula ACTS 20135 provided by: ACT Solutions Corp., Newark, Delaware, USA

### For additional information or samples:

#### DuPont Tate & Lyle Bio Products Customer Service

198 Blair Bend Drive  
Loudon, TN 37774

Tel: +1-866-404-7933

[www.duponttateandlyle.com](http://www.duponttateandlyle.com)



Copyright © 2016 DuPont Tate & Lyle Bio Products Company, LLC. Zemea® is a registered trademark of DuPont Tate & Lyle Bio Products Company, LLC, for its brand of bio-based propanediol. All rights reserved.

This technical product information is presented in good faith and is believed to be accurate and reliable as of the date of publication. DuPont Tate & Lyle Bio Products 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® 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® 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. DuPont Tate & Lyle Bio Products 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. (9/2017)