

Zemea®* the Natural Choice... Purity and Renewable Performance



Zemea®
renewably sourced™ propanediol

Zemea® Acne Treatment Solution with DuPont Glypure®

This formulation may be used as a rinse or be delivered by pads or other suitable applicators.

PHASE	INGREDIENT	TRADE NAME	WT, %
A1	SD Alcohol 40B, 190 Proof	SD Alcohol 40B, 190 Proof	40.00
A2	Salicylic Acid USP	Salicylic Acid USP	0.5 - 2.0
A3	Propanediol	Zemea® Propanediol	10.00
B1	Purified Water USP	Purified Water	40.00
B2	Glycolic Acid 70% Liquid¹	DuPont™ Glypure® L (70%)	5.00
B3	Triethanolamine 99% NF ²	Trolamine NF	to pH 3.8-4.2
B4	Aloe Barbadensis Leaf Juice	Aloe Vera Gel Decolorized 10X	1.00
B5	Polyquaternium-10	Polymer JR 30M	0.10
B6	Disodium Cocoamphodiacetate	Mackam 2C-LV	0.30
C1	Fragrance	As Desired	0.00
C2	Dye	As Desired	0.00
Adjust	Triethanolamine 99% NF ²	Trolamine NF	to pH 3.8-4.2
	Purified Water USP	Purified Water	qs to 100%

Manufacturing Procedure

Note: Prepare in equipment capable of alcohol preparations using an air-driven propeller mixer.

1. Add A1 to the main mixing vessel and begin mixing slowly.
2. Add A2 and mix until dissolved.
3. Add **Zemea® Propanediol** and mix Phase A until clear and soluble.
4. In a separate vessel, prepare Phase B by adding **Glypure® L (70%)** to the B1.
5. Adjust pH to the indicated range with B3, then add the remaining ingredients of Phase B with continued mixing. Gentle heating may be necessary to fully hydrate the Polyquaternium-10.
6. Add Phase B to Phase A with propeller mixing. Mix until water clear. Do not exceed 30°C.
7. Add fragrance and dye as desired and adjust final product to the indicated pH range.
8. Add adjusted percentage of Purified Water to 100%.

Note: Other botanical extracts or ingredients may be added as desired. Stability profiles of the finished product should be determined.

¹ Glypure® 99% may be substituted for Glypure® L (70%). Compensate Purified Water Percentage accordingly.

² May use other suitable alkalis eg. Sodium Hydroxide, Potassium Hydroxide, or Ammonium Hydroxide.

For additional information or samples, please contact:

DuPont Tate & Lyle Bio Products Customer Service
In the US, Canada, or Mexico: 1-866-404-7933
Other Countries: ++001-217-421-3443
On the web: www.duponttateandlyle.com



Chestnut Run Plaza 711 • 4417 Lancaster Pike • Wilmington, DE 19805

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