Glypure™

Cosmetic-Grade Glycolic Acid

Formulation—Hair Care
Clarifying Shampoo

Glypure™ penetrates the hair shaft, softening hair and providing superior lubrication.

- Makes hair significantly less prone to breakage
- Promotes manageability of hair
- Softens hair
- Provides moisturizing effect
- Reduces flaking and drying of the scalp
- Moisturizes the scalp

Phase	Trade Name	Wt%	INCI Name	Supplier
A1	Purified Water	35.00	Purified Water	
A2	Ucare™ Polymer JR-30M	0.50	Polyquaternium-10	Dow
A3	Glycerin USP	5.00	Glycerin	Vantage Specialty Ingredients, Spectrum
A4	Edeta® BD	0.05	Disodium EDTA	BASF
B1	Purified Water	15.00	Purified Water	
B2	**Glypure™**	**1.0**	**Glycolic Acid (70%)[1]**	**Chemours**
B3	Triethanolamine 99%	0.20	Triethanolamine 99% NF[2,3] to pH 3.5–4.0[3]	Dow, Vantage Specialty Ingredients
C1	Standapol® ES-2	10.00	Sodium Laureth Sulfate	BASF
C2	Velvetex® BA-35	10.00	Cocoamidopropyl Betaine	BASF
C3	Plantaren® 2000 N UP	6.00	Decyl Glucoside	BASF
C4	Glycerox™ HE-LQ-(MH)	3.00	PEG-7 Glyceryl Cocoate	Croda
C5	Glucamate™ DOE-120	1.50	PEG-120 Methyl Glucose Dioleate	Lubrizol
D1	Elestab® FL-15	2.50	Butylene Glycol (and) Glycerin (and) Chlorphenesin (and) Methylparaben	Lab. Serobiologiques/ BASF
E1		0.00	Dye (To Shade Desired)	
E2	As Desired	0.00	Botanical Extracts	
E3	As Desired w/Acidic Top Notes	0.00	Fragrance	
Adjust	Adjust final pH to 3.8–4.2 with Triethanolamine or Glypure™, as necessary			
qs	Purified Water[4]	qs to 100%	Purified Water	

Notes:

[1]Glypure™ (99%) may be substituted for Glypure™ (70%). Compensate for active Glycolic Acid content and Purified Water percentage accordingly.

[2]May use other suitable alkalis, e.g., Potassium Hydroxide, Ammonium Hydroxide, or Sodium Hydroxide.

[3]Do not exceed 2.5% of Triethanolamine to comply with EU regulations. If necessary, add another neutralizing agent.

[4]Compensate the Purified Water percentage accordingly to 100% batch weight.

Chemours™

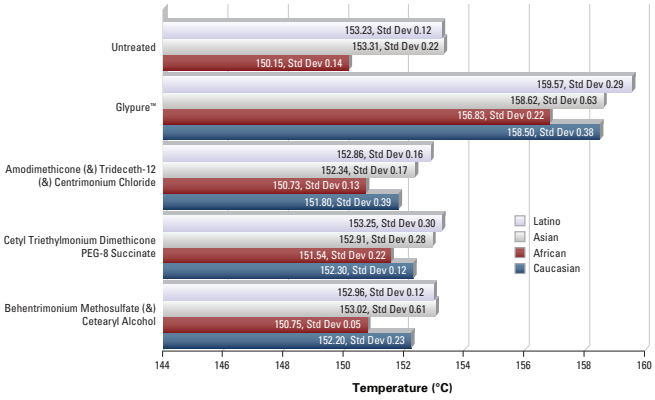
Manufacturing Procedure

1. To the main vessel, add A1.
2. Premix A2 and A3, and mix until uniform.
3. Add A2/A3 and A4 to A1, and mix until clear. Heat to 35 °C (95 °F) to aid solubility.
4. In a separate vessel, add B1-B3 in order, and mix until pH is constant.
5. Heat phase A to 60–65 °C (140–149 °F), and add C1-C5 in order. Mix until uniform.
6. When phase A/C is uniform and clear, begin cooling to 50–55 °C (122–131 °F).
7. At 50–55 °C (122-131 °F), add phase B, and mix until uniform.
8. Cool to 35–40 °C (95–104 °F), and add phases D and E.
9. With sweep mixing, cool to ambient temperature.

Glypure™ has proven benefits in hair, skin, and nail care formulations. To learn more about the benefits of Glypure™, visit www.glypure.com.

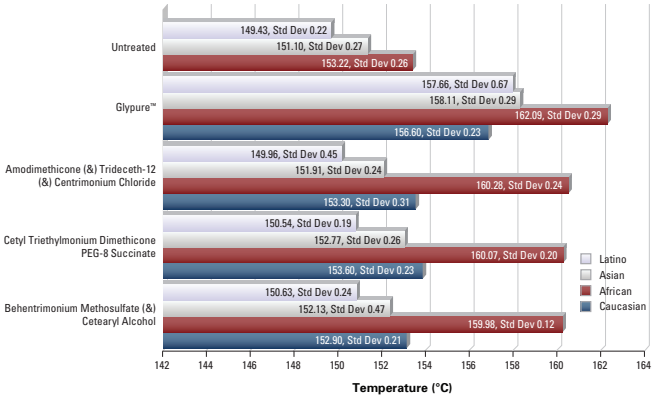
DSC – Healthy Hair

Glycolic Acid Penetrates the Hair Shaft and Interacts with Keratin to Increase the Denaturation Temperature



DSC – Chemically Damaged Hair

Glycolic Acid Penetrates the Hair Shaft and Interacts with Keratin to Increase the Denaturation Temperature



For more information, visit glycolicacid.chemours.com or call (800) 441-9593.

Replaces: K-24172
C-10796 (4/16)