

Glypure™

Cosmetic-Grade Glycolic Acid

Formulation—Hair Care Shampoo and Scalp Treatment



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 USP	10.00	Purified Water USP	
A2	Ucare™ Polymer JR-30M	0.15	Polyquaternium-10	Dow
A3	Purified Water USP	29.80	Purified Water USP	
A4	Edeta® BD	0.05	Disodium EDTA	BASF
A5	Glucamate™ DOE 120	0.50	PEG-120 Methyl Glucose Dioleate	Lubrizol
A6	Amphosol® CA	4.00	Cocamidopropyl Betaine	Stepan
A7	Plantaren® 2000 N UP	5.00	Decyl Glucoside	BASF
A8	Bio-Terge® AS-40 CG-P	20.00	C14-16 Alpha Olefin Sulfonate	Stepan
A9	Stepanol® WAT	5.00	TEA Lauryl Sulfate	Stepan
A10	Glycerox™ HE-LQ-(MH)	5.00	PEG-7 Glyceryl Cocoate	Croda
B1	Purified Water	10.00	Purified Water	
B2	Glypure™	1.0	Glycolic Acid (70%) ¹	Chemours
B3	Trolamine NF ²	2.50	Triethanolamine ²	-
C1	Euperlan® PK 3000 AM	1.00	Glycol Distearate Cocamidopropyl Betaine Laureth-4	BASF
C2	Spectragard™	1.00	Caprylyl Glycol (and) Hexylene Glycol (and) Water (and) Methylisothiazolinone	Inolex
C3	As Desired	0.00	Fragrance	As Desired
C4	As Desired	0.00	Dye	As Desired
C5	Sodium Chloride	2.00	Sodium Chloride	-
D1	Trolamine NF ²	pH 3.8-4.2	Triethanolamine ²	-
qs	Purified Water	qs to 100%	Purified Water	

Notes:

¹Glypure™ (99%) may be substituted for Glypure™ (70%). Compensate the purified water percentage accordingly.

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

Note: Stability profiles of the finished product should be determined.

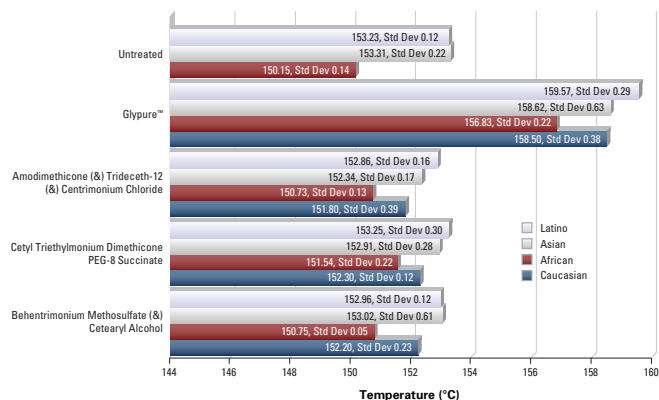
Manufacturing Procedure

1. In the main vessel, add A1, begin mixing, and slowly sprinkle in A2. Continue mixing, and raise temperature to 45-50 °C (113-122 °F). Mix until polymer is completely hydrated and mixture becomes a clear solution.
2. With continued mixing, add ingredients A3-A10 individually, allowing each to solubilize and clarify before adding the next ingredient.
3. In a separate vessel with mixing, add ingredients B1-B3 to partially pre-neutralize the glycolic acid. Add to the main vessel.
4. To the main vessel, add ingredients C1-C5 individually.
5. Adjust pH to 3.8-4.2 with desired neutralizing agent (D1), and adjust remaining water percentage accordingly.

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

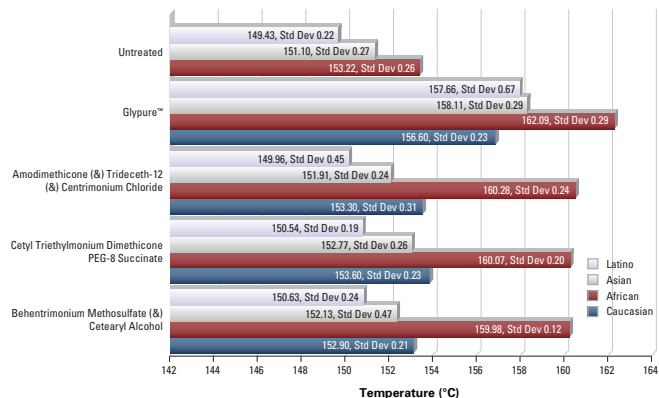
DSC - Healthy Hair

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.

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