

Glypure™

Cosmetic-Grade Glycolic Acid

Formulation—Hair Care Conditioner



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	70.00	Purified Water USP	
A2	Lexamine® 22	0.50	Stearamidoethyl Diethylamine	Inolex
A3	Ammonyx® SDBC	4.00	Stearamidopropylalkonium Chloride	Stepan
A4	Ammonyx® 4	2.50	Stearalkonium Chloride	Stepan
A5	Polawax™ NF	1.25	Emulsifying Wax NF	Croda
A6	Brij™ C2	0.75	Ceteth-2	Croda
A7	Procol CS-5	0.75	Ceteareth-5	Protameen
A8	Brij™ CS20	0.25	Ceteareth-20	Croda
A9	Edeta® BD	0.05	Disodium EDTA	BASF
B1	Purified Water	10.00	Purified Water	
B2	Glypure™	1.00	Glycolic Acid (70%) ¹	Chemours
B3	Triethanolamine 99%	1.50	Triethanolamine 99% NF ^{2,3} to pH 3.5-4.0 ³	Dow, Vantage Specialty Ingredients
C1	As Desired	0.00	Fragrance	As Desired
C2	As Desired	0.00	Dye	As Desired
C3	As Desired	0.00	Vitamins	As Desired
C4	Spectragard™	1.00	Caprylyl Glycol (and) Hexylene Glycol (and) Methylisothiazolinone (and) Water	Inolex
D1	Triethanolamine 99%	pH 4.0-4.2	Triethanolamine 99% NF ^{2,3}	
D2	Glypure™	pH 4.0-4.2	Glycolic Acid (70%) ¹	Chemours
qs	Purified Water	qs to 100%	Purified Water	

Notes:

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

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

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

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

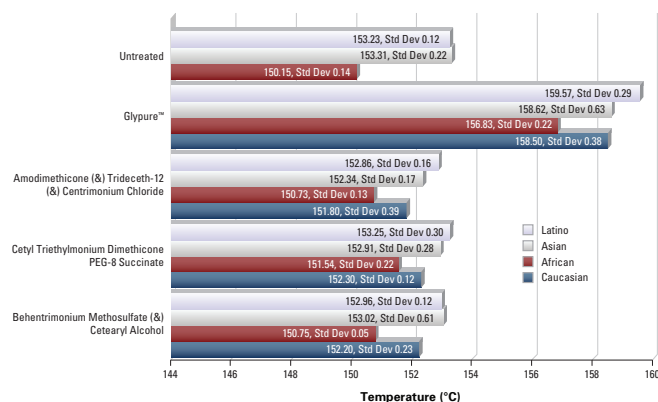
Manufacturing Procedure

1. In the main vessel, add A1, and begin heating to 80-85 °C (176-185 °F).
2. With continued mixing, add ingredients A2-A9 individually. Mix until all solids are melted and a uniform emulsion is formed. Homogenize if necessary.
3. In a separate vessel with mixing, add ingredients B1-B3 to partially pre-neutralize the glycolic acid. Add to the main vessel. Mix until uniform. Continue cooling.
4. At <40 °C (104 °F), add C1-C4.
5. Adjust pH to 4.0-4.2 as indicated and 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.

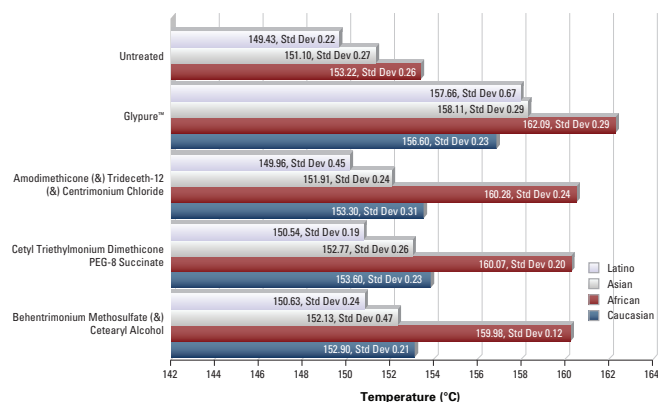
DSC - Healthy Hair

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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