# 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:

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

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

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

Chemours™

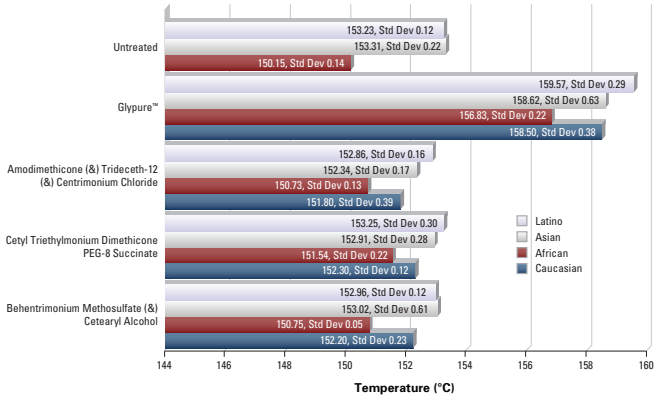
## Manufacturing Procedure

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.

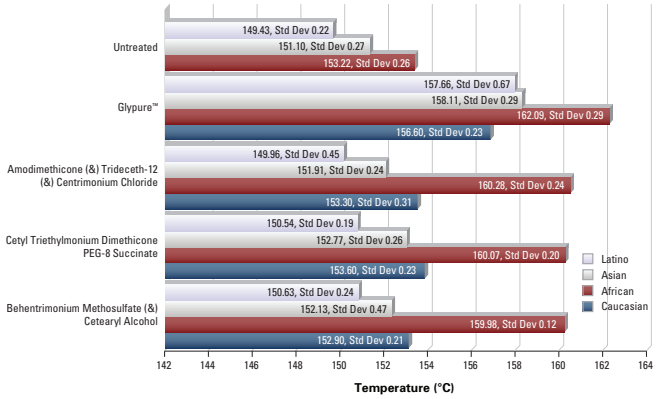
### DSC - Healthy Hair

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.**



Replaces: K-25447
C-10769 (3/16)