

# Glypure™

## Cosmetic-Grade Glycolic Acid

### Formulation—Skin Care Skin Lightening Gel with Kojic Acid



Glypure™ penetrates the skin efficiently—readjusting water percentages in the epidermis, stimulating collagen synthesis, and promoting cell turnover. It helps to enhance the effects of kojic acid through its efficient skin penetration and is an efficient pH adjuster.

- Improves the look and feel of skin
- Promotes exfoliation
- Improves skin texture
- Fights the signs of aging
- Reduces the appearance of fine lines and wrinkles
- Helps even out skin tone
- Improves the appearance of sun-damaged skin
- Enhances the performance of kojic acid

Phase	Trade Name	Wt%	INCI Name	Supplier
A1	Purified Water USP	65.00	Purified Water USP	
A2	<b>Glypure™</b>	<b>5.60</b>	<b>Glycolic Acid (70%)<sup>1</sup></b>	<b>Chemours</b>
A3	Sol, Sodium Hydroxide, 25%	pH 3.8-4.2	Sodium Hydroxide	-
A4	Sodium Sulfite	0.50	Sodium Sulfite	Spectrum Chemical
A5	Zemea™ Propanediol	7.50	Propanediol	DuPont Tate & Lyle Bio Products
A6	Kojic Acid	1.40	Kojic Acid	Spectrum Chemical
A7	SD Alcohol 40-B (190 proof)	11.20	SD Alcohol 40-B, 190 Proof	-
A8	BHT	0.01	BHT (Butylated Hydroxytoluene)	Merisol Antioxidants, LLC
A9	Ucare™ Polymer JR-30M	0.93	Polyquaternium-10	Dow
A10	As Desired	0.00	Dye	As Desired
A11	As Desired	0.00	Fragrance	As Desired
<b>Adjust</b>	Adjust final pH to 3.8-4.2 with Sodium Hydroxide, 25% or Glypure™, as necessary			
<b>qs</b>	Purified Water	qs to 100%	Purified Water	-

#### Notes:

<sup>1</sup>Glypure™ (99%) may be substituted for Glypure™ (70%). Compensate for active Glycolic Acid content and purified water percentage accordingly.

<sup>2</sup>May use other suitable alkalis, e.g., Potassium Hydroxide, Ammonium Hydroxide, or Sodium Hydroxide.

<sup>3</sup>Adjust finished product to desired viscosity by varying the percentage of Polyquaternium-10.

\*Other botanical extracts or ingredients reported as skin lightening agents may be added as desired. Stability profiles of the finished product should be determined.

In lieu of Glypure™, formulators and manufacturers must use Glypure™ L for products used or distributed in Canada or Australia and in Europe for nail care products.

## Manufacturing Procedure

- All equipment should be passivated and free of any trace metal.
  - Maintain temperature between 25-30 °C (77-86 °F) for the entire preparation.
  - For best stability, blanket entire preparation, storage, and filling operations with nitrogen.
  - The main vessel is equipped with a counter-rotating sweep blade and propeller mixer.
1. Add the purified water to the main vessel.
  2. With mixing, add A2 and mix until uniform.
  3. Adjust the pH of A2 with A3.
  4. Add A4 and mix until all solids are dissolved.
  5. Add A5 and A6, and mix until completely soluble.
  6. In a side vessel, add A7 and A8, and mix until soluble.
  7. Slowly add A9 with vigorous agitation until uniformly dispersed.
  8. Add this mixture to the main vessel with vigorous agitation.
  9. Add any dye, fragrances or extracts as desired and mix approximately 1 hr to final viscosity.
  10. Adjust batch to indicated pH and qs to 100% with purified water.

Glypure™ has proven benefits in hair, skin, and nail care formulations. To learn more about the benefits of Glypure™, visit [www.glypure.com](http://www.glypure.com).

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**For more information, visit [glycolicacid.chemours.com](http://glycolicacid.chemours.com) or call (800) 441-9593.**

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