

# Glypure™

## Cosmetic-Grade Glycolic Acid

### Formulation—Skin Care Day Cream With Matrixyl®



Glypure™ penetrates the skin efficiently—readjusting water percentages in the epidermis, stimulating collagen synthesis, and promoting cell turnover. It is also an efficient pH adjuster.

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

Phase	Trade Name	Wt%	INCI Name	Supplier
A1	Purified Water USP	42.00	Purified Water USP	
A2	Veegum® Ultra	0.60	Magnesium Aluminum Silicate	Vanderbilt Minerals, LLC
A3	Glycerin USP	3.00	Glycerin 99% USP	–
A4	Keltrol® CG-T	0.30	Xanthan Gum NF	CP Kelco
A5	Edeta® BD	0.05	Disodium EDTA	BASF
B1	Purified Water USP	25.00	Purified Water USP	
B2	<b>Glypure™</b>	<b>5.00</b>	<b>Glycolic Acid (99%)<sup>1</sup></b>	<b>Chemours</b>
B3	Triethanolamine 99%	to pH 3.6-4.0	Triethanolamine 99% NF <sup>2</sup>	–
C1	Arlacel™ 165	1.50	Glyceryl Stearate/PEG-100 Stearate	Croda
C2	Crodafos™ CES	2.50	Cetearyl Alcohol/Dicetyl Phosphate/ Ceteth 10 Phosphate	Croda
C3	Crodacol™ CS-50	1.50	Cetearyl Alcohol	Croda
C4	Elefac™ I-205	3.00	Octyldodecyl Neopentanoate	Alzo
C5	Cetiol® B	3.00	Dibutyl Adipate	BASF
C6	Myrj™ S100	0.50	PEG-100 Stearate	Croda
C7	Lexemul® 515	0.30	Glyceryl Stearate	Inolex
C8	CremerVERO Ref. Shea Butter RSB 35 Organic	2.00	Butrospermum Parkii	Cremer Care
D1	Xiameter® PMX-0345 Cyclosiloxane Blend	2.00	Cyclomethicone	Dow Corning
E1	Matrixyl® 3000	3.00	Glycerin/Water/Butylene Glycol/ Polysorbate 20/Palmitoyl Pentapeptide-3 <sup>3</sup>	Sederma
E2	Elestab® FL-15	2.50	Butylene Glycol/Glycerin/ Chlorphenesin/Methylparaben	Lab. Serobiologiques/ BASF
F1	As Desired	0.00	Fragrance	As Desired
F2	As Desired	0.00	Dye	As Desired
qs	Purified Water USP	qs to 100%	Purified Water USP	

#### Notes:

Be sure to compensate for any lost volatiles in phase A and finished product. Stability profiles of the finished product should be determined. Acid-stable aesthetic and claims additives may be added as desired.

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

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

<sup>3</sup>A cream may be formulated using Matrixyl® 3000. Matrixyl® 3000 (Glycerin/Water/Butylene Glycol/Carbomer/Polysorbate 20/Palmitoyl Oligopeptide/Palmitoyl Tetrapeptide-3).

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

1. Prepare phase A by adding A1 and with mixing, slowly add A2. Allow to hydrate 20-30 min.
2. Pre-wet A4 in A3 and mix until uniform. Add to the purified water/Veegum® mixture.
3. Add A5 and mix for 10 min.
4. In a separate vessel, prepare phase B as indicated. Add phase B to phase A and heat to 70-75 °C (158-167 °F).
5. In a separate vessel, add ingredients of phase C and begin heating to 70-75 °C (158-167 °F).
6. When both phase AB and phase C are at 70-75 °C (158-167 °F), add phase C to phase AB. Homogenize for 15 min.
7. Cool to 60-62 °C (140-144 °F) and add phase D to phase ABC. Homogenize for 10 min.
8. Begin cooling to 40 °C (140 °F).
9. When temperature is <40 °C (140 °F), add ingredients of phases E and F individually. At <30 °C (86 °F), pH may be adjusted to 3.8-4.2, using B2 or B3 at this step.
10. Add any make-up water and sweep mix for 15 min.
11. Cool to 25-30 °C (77-86 °F) with sweep mixing.

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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