

Glypure™

Cosmetic-Grade Glycolic Acid

Formulation—Cuticle Cream

	INCI Name	Trade Name	Supplier	wt%
Phase A	Purified Water USP	Purified Water		40.00
	Magnesium Aluminum Silicate	Magnabrite S	Amcol	0.60
	Glycerin 99% USP	Glycerin USP	Spectrum	3.00
	Propylene Glycol	Propylene Glycol USP	Spectrum	1.50
	Xanthan Gum NF	Keltrol CG-T, Vanzan NF	Kelco, R.T. Vanderbilt	0.30
	Disodium EDTA	Versene NA2X, Dissolvine NA2S	Dow, Akzo	0.05
Phase B	Purified Water	Purified Water		15.00
	Glycolic Acid (70%) ¹	Glypure™ (70%)	Chemours	5.75
	Triethanolamine 99% NF ²	Trolamine 99	Dow, Ineos	0.90
	To pH 3.3–3.5 ³			
Phase C	Glyceryl Stearate/PEG-100 Stearate	Arlacel 165V	Croda	3.50
	Glyceryl Stearate	Cutina GMS V	BASF	0.50
	Stearic Acid	Emersol 7036	Emery Oleochemicals	2.00
	Cetearyl Alcohol	Lanette O	BASF	2.50
	White Petrolatum	Ultima USP	Penreco	4.00
	Tocopheryl Acetate	Vitamin E Acetate	BASF	0.25
	Octyldodecyl Myristate	ODM 100	Barnet	2.50
	Octyldodecyl Neopentanoate	Elefac I-205	Alzo	3.00
	Dimethicone	DC 200/100 cst	Dow Corning	1.00
	Ethylhexyl Hydroxystearate	Wickenol 171	Alzo	3.00
Phase D	Cyclomethicone	ST-Cyclomethicone 5-NF	Dow Corning	1.50
	Isododecane	Permethyl 99A	Presperse	1.50
	Isohexadecane	Permethyl 101A	Presperse	1.50
Phase E	Butylene Glycol (and) Glycerin (and) Chlorphenesin (and) Methylparaben	Elestab FL-15	Lab.Serobiologiques/ BASF	2.50
Phase F	Dye, Fragrance, and Additives ⁴	As Desired	As Desired	
	Purified Water	Purified Water		qs to 100%

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.

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

⁴Compensate the Purified Water percentage accordingly for any additives.

Manufacturing Procedure

- 1) Prepare Phase A by adding water to the main vessel and begin mixing.
- 2) Slowly add A2 and mix for 15–30 min to hydrate.
- 3) Pre-wet A5 in A3 and A4, and mix until a uniform dispersion is obtained. Add to A1 and A2, and mix until uniform.
- 4) Add A6, and continue mixing while heating to 70–75 °C (158–167 °F).
- 5) In a separate vessel, mix B1 and B2 (Glypure™) and adjust pH accordingly with B3.
- 6) In a separate vessel, add C1 through C10, and heat to 70–75 °C (158–167 °F). Begin mixing slowly when solid ingredients begin to melt.
- 7) When Phases A and C are at the proper temperature range, add Phase C to Phase A slowly. When complete, homogenize for 5 min.
- 8) Begin cooling. When Phase AC is at 62–65 °C (144–149 °F), pre-blend D1 through D3 and add to Phase AC. Homogenize while cooling is continued.
- 9) When Phase ACD is 45–50 °C (113–122 °F), add pH-adjusted Phase B. Continue homogenizing and cooling.
- 10) Continue cooling and add E and F at 36–38 °C (97–100 °F) and any make-up water due to additive additions and water losses.
- 11) Adjust to pH 3.7–4.0 if necessary with appropriate neutralizing agent.
- 12) Turn off homogenizer and sweep mix to <30 °C (86 °F).

For more information, visit glycolicacid.chemours.com or call (800) 441-9593.

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