

Glypure™

Cosmetic-Grade Glycolic Acid

Formulation—Men's Care Foot Cream



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

Phase	Trade Name	Wt%	INCI Name	Supplier
A1	Purified Water USP	50.00	Purified Water USP	
A2	Magnabrite® S	0.40	Magnesium Aluminum Silicate	Amcol/Minerals Technologies
A3	Edeta® BD	0.10	Disodium EDTA	BASF
A4	Glypure™	11.40	Glycolic Acid (70%) ¹	Chemours
A5	Ammonia Solution Strong NF	2.50	Ammonium Hydroxide 28% ² —to pH 3.4–3.7 ³	–
A6	Zemea® Propanediol	3.00	Propanediol	DuPont Tate & Lyle Bio Products
A7	Keltrol® CG-T	0.20	Xanthan Gum NF	CP Kelco
A8	Biowax® Liquid 754	1.00	PEG-8 Dimethicone	Biosil Technologies
B1	Arlacel™165-PW-(AP)	4.00	Glyceryl Stearate/PEG-100 Stearate	Croda
B2	Alkest® SP 60 F	2.00	Sorbitan Stearate	Oxiteno
B3	Varisoft® TA 100	0.50	Distearyldimonium Chloride	Evonik Industries
B4	BHT	0.05	Butylated Hydroxytoluene (BHT)	Merisol Antioxidants, LLC
B5	Ultima USP	3.00	White Petrolatum	Penreco
B6	Biochemica® Cocoa Butter Deo	4.00	Theobroma Cacao (Cocoa) Seed Butter	Hallstar
B7	CremerVERO Ref. Shea Butter RSB 35 Organic	3.00	Butyrospermum Parkii (Shea Butter)	Cremer Care
B8	XIAMETER® PMX-200 Silicone Fluid 100CS	2.00	Dimethicone	Dow Corning
B9	Floraesters Jojoba Oil-Refined	2.50	Simmondsia Chinensis (Jojoba) Seed Oil	Floratch
B10	BioVera™ Oil	1.00	Aloe Barbadensis (Aloe Vera) Leaf Extract (and) Canola Oil	BioChemica Intl.
B11	Lanette® 22	4.00	Behenyl Alcohol	BASF
B12	Vitamin E Acetate	0.50	Tocopheryl Acetate	DSM
B13	Bisabolol Rac.	0.10	a-Bisabolol	BASF
B14	Frescolat® ML	0.50	Menthyl Lactate	Symrise
B15	Nipasol® M	0.15	Propylparaben	Clariant
C1	Elestab® FL-15	2.50	Butylene Glycol (and) Glycerin (and) Chlorphenesin (and) Methylparaben	Lab. Serobiologiques/BASF
D1	As Desired	0.00	Dye, Fragrance, and Additives ^{4,5}	As Desired
qs	Purified Water USP	qs to 100%	Purified Water USP	

Notes:

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

²May use other suitable alkalis, e.g., Potassium Hydroxide, Triethanolamine, 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.

⁵May add methyl salicylate as a common additive for foot creams.

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 to the main vessel, and begin mixing.
2. Slowly add A2, and mix for 15–30 min to hydrate.
3. Add A3, and mix until dissolved.
4. Add A4, and adjust pH to the appropriate range with A5 or alternate neutralizing agent.
5. Pre-wet A7 in A6, and mix until a uniform dispersion is obtained. Add to the main vessel, and mix until uniform.
6. Add A8, and mix until uniform.
7. Begin heating to 70–75 °C (158–167 °F). Homogenize phase A, if necessary, for uniformity.
8. In a separate vessel, add B1–B15 and heat to 70–75 °C (158–167 °F). Begin mixing slowly when solid ingredients begin to melt.
9. When phases A and B are at the proper temperature range, add phase B to phase A slowly. When complete, homogenize for 5 min.
10. Begin cooling. When phase AB is at 40–43 °C (104–109 °F), add phase C to phase AB. Homogenize while cooling is continued.
11. When temperature is 40 °C (104 °F), turn off homogenizer; continue cooling and add phase D ingredients.
12. Adjust pH to 3.5–3.8, if necessary.
13. Add purified water to compensate for water losses and pH adjustment.

Glypure™ has proven benefits in hair, skin, and nail care formulations. To learn more about the benefits of Glypure™, visit www.glypure.com.

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

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