




Formulation

Name	DAILY MOISTURIZING SULFATE-FREE SHAMPOO	
No.	1300	
Description	This shampoo formulation is free from all sulfates, including inorganic sodium sulfate. Used as a daily shampoo, it gently lathers and removes grease and buildup with a light conditioning effect.	
Formulation	INGREDIENTS:	
	% by Weight	Functionality
	=== Phase 1 ===	
	Deionized Water	q.s. to 100.00 Diluent
	UCARE™ Polymer JR-30M (Dow, Inc.)	0.20 Conditioning Agent
	MAPROSYL® 30-B	30.00 Primary Surfactant
	AMPHOSOL® CDB-HP	20.00 Secondary Surfactant
	=== Phase 2 ===	
	HALLSTAR® EGMS (Hallstar)	0.5 Pearlescent Agent
	STEPAN® SLL-FB	2.00 Surfactant, Foam Booster
	=== Phase 3 ===	
	STEPAN-MILD® GCC	0.25 Conditioning Agent, Emollient
	STEPAN-MILD® L3	0.25 Conditioning Agent, Emollient
	Merquat™ 550 (The Lubrizol Corporation) Polyquaternium-7	3.00 Conditioning Agent
	=== Phase 4 ===	
	Citric Acid (50% Solution)	q.s. pH Adjuster
	Sodium Hydroxide (50% Solution)	q.s. pH Adjuster
	Sodium Chloride	q.s. Viscosity Adjuster
	Fragrance, Dye and Preservative	q.s. Additives
	Total	100.00
Procedure	<ol style="list-style-type: none">1. Add Deionized Water to a suitable vessel equipped with heating and agitation capabilities.2. Sprinkle in UCARE™ Polymer JR-30M. Mix until dispersed and clear.3. Add MAPROSYL® 30-B and AMPHOSOL® CDB-HP with mixing. Start heating to 75°C (167°F).4. Once at 75°C (167°F), add STEPAN® SLL-FB and HALLSTAR® EGMS with mixing until clear and then begin cooling.5. At 45°C (113°F), add STEPAN-MILD® GCC, STEPAN-MILD® L3 and Merquat 550. Mix until all is dissolved.6. Cool to room temperature. Adjust pH with Citric Acid or Sodium Hydroxide and adjust viscosity with Sodium Chloride, if necessary.7. Add Preservative, Dye, and Fragrance, as desired.	
Physical Properties	Appearance, as is	Pearlescent, viscous liquid
	pH at 25°C, as is	5.5 - 6.5
	Viscosity at 25°C (LVT #3 at 12 rpm), cps	3,000-5,000
Storage/	4 weeks at 5°C	Stable
Stability	4 weeks at 25°C	Stable

	4 weeks at 45°C Freeze/Thaw 3 cycles	Stable Pass
Instructions for Use	Apply to wet hair. Lather, then rinse thoroughly. Repeat if desired. Use daily.	
External Comment	Marketing Notes: BCI = 84. Total Biorenewable Carbon Index (BCI) was calculated only for the Stepan surfactants used in this formulation. Other non-Stepan ingredients were not evaluated. For further information on Stepan's BCI, visit www.stepan.com . Sulfate free is defined as containing no alcohol sulfate or alcohol ether sulfate as per INCI nomenclature. This formulation also contains no inorganic sulfates.	
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