

Name	DAILY MOISTURIZING SULFATE-FREE SHAMPOO WITH MAPROSYL® 30-MP	
No.	1420	
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. This formulation is suitable for the Asia Pacific region.	
Formulation	INGREDIENTS:	<u>% by Weight</u> Functionality
	=== Phase 1 === Deionized Water UCARE™ Polymer JR-30M (Dow, Inc.) Polyquaternium-10 MAPROSYL® 30-MP AMPHOSOL® CDB-HP === Phase 2 ===	q.s. to 100.00 Diluent 0.20 Conditioning Agent 30.00 Primary Surfactant 20.00 Secondary Surfactant
	HALLSTAR® EGMS (Hallstar) Glycol Stearate STEPAN® SLL-FB	0.50 Pearlescent Agent 2.00 Surfactant, Foam Booster
	=== Phase 3 === STEPAN-MILD® GCC STEPAN-MILD® L3 Galsilk 700 (Galaxy Surfactants Ltd.) Polyquaternium-7	<ul><li>0.25 Conditioning Agent, Emollient</li><li>0.25 Conditioning Agent, Emollient</li><li>3.00 Conditioning Agent</li></ul>
	=== Phase 4 === Citric Acid (50% Solution) Sodium Hydroxide (50% Solution) Sodium Chloride Fragrance, Dye and Preservative	q.s. pH Adjuster q.s. pH Adjuster q.s. Viscosity Adjuster q.s. Additives
	Total	100.00
Procedure	<ol> <li>Add Deionized Water to a suitable vessel equipped with heating and agitation capabilities.</li> <li>Sprinkle in UCARE<sup>™</sup> Polymer JR-30M. Mix until dispersed and clear.</li> <li>Add MAPROSYL® 30-MP and AMPHOSOL® CDB-HP with mixing. Start heating to 75°C (167°F).</li> <li>Once at 75°C (167°F), add STEPAN® SLL-FB and HALLSTAR® EGMS with mixing until clear and then begin cooling.</li> <li>At 45°C (113°F), add STEPAN-MILD® GCC, STEPAN-MILD® L3 and Galsilk 700. Mix until all is dissolved.</li> <li>Cool to room temperature. Adjust pH with Citric Acid or Sodium Hydroxide and adjust viscosity with Sodium Chloride, if necessary.</li> <li>Add Preservative, Dye, and Fragrance, as desired.</li> </ol>	
Physical Properties	Appearance, as is pH at 25ºC, as is Viscosity at 25ºC (LVT #3 at 12 rpm), cps	Pearlescent, viscous liquid 5.5 - 6.5 3,000 - 5,000

Storage/ Stability	12 weeks at 5°C 12 weeks at 25°C 12 weeks at 45°C Freeze/Thaw 3 cycles	Stable Stable 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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