

Formulation

Name	HIGH-FOAMING, PREMIUM SULFATE-FREE SHAMPOO	
No.	1158	
Description	The formulation delivers exceptional foaming and good conditioning properties.	
Formulation	INGREDIENTS:	<u>% by Weight</u> <u>Functionality</u>
	STEPAN-MILD® LSB	26.70 Primary Surfactant
	LATHANOL® LAL POWDER	1.43 Surfactant
	ALPHA-STEP® PC-48	5.25 Surfactant
	AMPHOSOL® HCG (or AMPHOSOL® HCG-HP)	13.10 Secondary Surfactant, Thickener
	STEPAN-MILD® GCC	1.00 Foam Booster, Thickener
	Sodium Chloride	q.s. Viscosity Builder
	Citric Acid	q.s. pH Modifier
	Deionized Water	q.s. to 100.00 Carrier
	Fragrance, Dye, and Preservative	q.s. Additive
	Total	100.00
Procedure	<ol style="list-style-type: none"> 1. Charge Deionized Water in a suitable vessel equipped with heating and agitation capabilities. 2. While agitating, heat water to 55°C–60°C (131°F–140°F) then add STEPAN-MILD® LSB and LATHANOL® LAL Powder. Mix well until solubilized. 3. Cool down to 40°C–45°C (104°F–113°F). Add AMPHOSOL® HCG (or AMPHOSOL® HCG-HP), while continuing agitation. 4. Add STEPAN-MILD® GCC. Mix well. 5. Cool batch to 25°C (77°F). Adjust pH with Citric Acid. 6. Add Fragrance, Dye, and Preservative. 7. Adjust viscosity with Sodium Chloride, if necessary. <p>*Note: When formulating with AMPHOSOL® HCG-HP, a greater amount of Citric Acid may be needed to adjust the pH within the recommended range as noted, than when formulating with AMPHOSOL® HCG.</p>	
Physical Properties	Appearance at 25°C	Clear liquid
	pH, as is	4.8–5.0
	pH, after adjustment	5.5–5.8
	Viscosity at 25°C, cps	4,100–4,500
Storage/Stability	4 weeks at 25°C	Stable
	4 weeks at 4°C	Stable
	4 weeks at 50°C	Stable
	Freeze/thaw 3 cycles	Pass
Instructions for Use	Apply the product to wet hair. Lather, then rinse thoroughly.	
	This is a high-foaming shampoo having a light conditioning effect.	
External Comment	Marketing Notes: BCI = 69. Total Biorenewable Carbon Index (BCI) was calculated only for the Stepan surfactants used in this formulation. LATHANOL® LAL Flake can be used as a	

replacement for LATHANOL® LAL Powder. For further information on Stepan's BCI, visit www.stepan.com. STEPAN-MILD® GCC is ECOCERT certified. For more information on ECOCERT, visit www.ecocert.com. Sulfate free is defined by Stepan as containing no Alcohol Sulfates and no Alcohol Ether Sulfates as per the INCI Nomenclature.

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Assistance

For applications or product handling assistance, call our Technical Service Department at 1-800-745-7837 (U.S.) or 011-334-76-505-100 (Europe).
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