

# Formulation

Name	<b>CLEAR GEL SHAMPOO</b>	
No.	728	
Description	A mild gel shampoo with good tactile properties	
Formulation	<u>INGREDIENTS:</u>	<u>% by Weight</u>
	=== Phase 1 ===	
	Deionized Water	q.s. to 100.0
	STEOL® CS-330 (or STEOL® CS-330 HP)	15.0
	LATHANOL® LAL Powder	12.0
	AMPHOSOL® CA	4.0
	=== Phase 2 ===	
	NINOL® CMP	1.5
	Hydrolyzed Collagen	1.0
	=== Phase 3 ===	
	Sodium Chloride	q.s.
	Citric Acid	q.s.
	Fragrance, Dye, & Preservative	q.s.
	<b>Total</b>	<b>100.0</b>
Procedure	<ol style="list-style-type: none"> <li>1. In a suitable kettle (with mixing, heating, and cooling), add the first four ingredients (Phase 1) and mix well.</li> <li>2. Heat kettle to 70°C with mixing until solution is clear.</li> <li>3. Add Phase 2 and continue to mix until solution is clear at 70°C.</li> <li>4. Cool to room temperature.</li> <li>5. Adjust pH to 6.0–6.5 with Citric Acid.</li> <li>6. Add Fragrance, Dye, and Preservative.</li> <li>7. Add Sodium Chloride to adjust viscosity.</li> </ol> <p>*Note: When formulating with STEOL® CS-330 HP, a greater amount of Citric Acid may be needed to adjust the pH within the recommended range as noted, than when formulating with STEOL® CS-330.</p>	
Physical Properties	Appearance at 25°C	Clear, water-white liquid
	pH, as is at 25°C	6.0–6.5
	Viscosity, as is (spindle #4 at 12 rpm), cps	2,650
	Color, Gardner	<1
Storage/Stability	6 weeks at 25°C	Stable
	6 weeks at 42°C	Stable
	6 weeks at 50°C	Stable
	Freeze/Thaw (3 cycles)	Pass
External Comment	Marketing Notes: AMPHOSOL® HCA-HP may be potential substitute for AMPHOSOL® CA. It should be noted that stability testing using AMPHOSOL® HCA-HP has not been completed on this formulation, and in addition to the pH adjustment taking a greater amount of Citric Acid, the substitution may also yield slightly different physical properties.	
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