


# Formulation

Name	<b>SHAMPOO WITH HEAT PROTECTION</b>	
No.	814	
Description	This shampoo protects the hair from heat in addition to having excellent cleansing and conditioning properties.	
Formulation	<b>INGREDIENTS:</b>	<b>% by Weight</b>
	=== Phase 1 ===	
	Deionized Water	q.s. to 100
	STEPANOL® AM-V	34.5
	STEOL® CS-230	32.0
	NINOL® LMP	2.0
	=== Phase 2 ===	
	HALLSTAR® SAB-2 (Hallstar) Distearyl Phthalic Acid Amide	3.5
	=== Phase 3 ===	
	Silsoft A-843 (Witco) Dimethicone Bisaminohydroxypropyl Copolyol	2.0
	=== Phase 4 ===	
	AMPHOSOL® HCG (or AMPHOSOL® HCG-HP)	6.7
	Liquid DL-Panthenol (Roche) Panthenol	1.0
	Hydrotriticum WAA (Croda) Wheat Amino Acids	1.8
	Crodasone W (Croda) Hydrolyzed Wheat Protein PG-Propyl Silanetriol	1.85
	=== Phase 5 ===	
	Sodium Hydroxide, 50% solution	
	Citric Acid, 50% solution	q.s.
	Sodium Chloride	q.s.
	Preservative, Dye, Fragrance	q.s.
	<b>Total</b>	<b>100.0</b>
Procedure	<ol style="list-style-type: none"> <li>1. Combine Phase 1 ingredients and heat to 76°C-79°C (170°F-175°F).</li> <li>2. Add Phase 2 ingredient at 79°C (175°F). Mix until dispersed.</li> <li>3. Add Phase 3 ingredient. Emulsify for 25-30 minutes while maintaining the temperature between 76°C-79°F (170°F-175°F). Start cooling.</li> <li>4. At 38°C (100°F), add Phase 4 ingredients. Mix well.</li> <li>5. When mixture cools to 27°C (80°F), add Phase 5 ingredients to adjust pH and viscosity at 27°C (80°F). Mix well.</li> </ol> <p>*Note: When formulating with AMPHOSHOL® HCG-HP, a greater amount of Citric Acid, 50% solution, 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	Opaque liquid
	pH, as is	5.8-6.2
	Viscosity at 25°C, cps	6,500-7,000
Storage/	3 months at 25°C	Stable

Stability	2 months at 50°C	Stable
Instructions for Use	Apply to wet hair. Lather, rinse and repeat, if desired.	
External Comment	Marketing Notes: Amide free indicates that this formulation does not contain an alkanolamide. STEOL® CS-230 PC HP may be a potential substitute for STEOL CS-230. It should be noted that stability testing using this STEOL® CS-230 PC HP has not been completed on this formulation, and in addition to the pH adjustment taking a greater amount of Citric Acid, 50% solution, the substitution may also yield slightly different physical properties. STEPANOL® AMV PCK may be a potential substitute for STEPANOL® AM-V. It should be noted that stability testing using this STEPANOL® AMV PCK has not been completed on this formulation. The substitution may yield slightly different physical properties.	
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