



# Formulation

Name	<b>WATERLESS (LOW ENERGY) SHAMPOO</b>	
No.	1268	
Description	This low energy shampoo employs the use of a self-foaming pump to instantly create foam upon dispensing, thus saving water and time when used. This shampoo can be used either as a low energy rinse-off shampoo or as a waterless shampoo that can be applied to the hair and towel dried, achieving a similar effect to conventional dry shampoos.	
Formulation	<u>INGREDIENTS:</u>	<u>% by Weight</u> <u>Functionality</u>
	=== Phase 1 ===	
	Deionized Water	q.s. to 100.00 Carrier
	STEPANOL® AM-BA	5.40 Primary Surfactant
	AMPHOSOL® HCA-HP	2.50 Secondary Surfactant
	STEPAN-MILD® L3	0.25 Feel Enhancer
	=== Phase 2 ===	
	Citric Acid, 50% solution	q.s. pH Adjuster
	Sodium Hydroxide, 50% solution	q.s. pH Adjuster
	Fragrance, Dye & Preservative	q.s. Additives
	<b>Total</b>	<b>100.00</b>
Procedure	<ol style="list-style-type: none"> <li>1. In a suitable vessel equipped with agitation, charge Phase 1 ingredients. Mix until clear and homogenous.</li> <li>2. Adjust pH with either Citric Acid, 50% solution or Sodium Hydroxide, 50% solution to pH 5-6.</li> <li>3. Add Fragrance, Dye, and Preservative as desired.</li> </ol>	
Physical Properties	Appearance at 25°C	Clear liquid
	pH, as is	5.0-6.0
	Viscosity at 25 °C, cps	Water-thin
Storage/Stability	4 weeks at 25°C	Stable
	4 weeks at 4°C	Stable
	4 weeks at 45°C	Stable
	Freeze/thaw, 3 cycles	Passes
Instructions for Use	As a rinse-off shampoo: Dispense 1-2 pumps of foam into palm of hand. Apply to hair. Rinse thoroughly. As a leave-in waterless shampoo: Dispense 1-2 pumps of foam into palm of hand. Apply to hair, concentrating towards roots. Use towel to dry the hair. Style as desired.	
External Comment	Marketing Notes: BCI = 87. Total Biorenewable Carbon Index (BCI) was calculated only for the Stepan surfactants used in this formulation. Other ingredients were not evaluated. For further information on Stepan's BCI, visit <a href="http://www.stepan.com">www.stepan.com</a> .	
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