



# Formulation

Name	<b>PREMIUM CONDITIONING SULFATE-FREE SHAMPOO WITH MORINGA OIL</b>	
No.	1258	
Description	This pearlescent shampoo delivers excellent shine and softness to the hair by using a combination of silicone, STEPAN-MILD® L3, and cationic starch. NINOL® CAA solubilizes the fragrance and builds viscosity in the formulation without the addition of salt.	
Formulation	<b>INGREDIENTS:</b>	<b>% by Weight    Functionality</b>
	=== Phase 1 ===	
	Deionized Water	q.s. to 100.00 Carrier
	PenCare DP 1015 (Penford) Cationic Polymer	0.08 Feel Enhancer
	BIO-TERGE® AS-40 HA	36.00 Primary Surfactant
	AMPHOSOL® HCG	12.00 Secondary Surfactant
	STEPAN-MILD® L3	0.50 Emollient
	HALLSTAR® EGMS (Hallstar) Glycol Monostearate	0.40 Pearlescent Agent
	=== Phase 2 ===	
	NINOL® CAA	1.80 Secondary Surfactant, Solubilizer
	Fragrance	0.50 Fragrance
	Moringa Oil (Princeton Chemicals, Inc.)	0.05 Emollient
	=== Phase 3 ===	
	Dow Corning® CE-1874 (Dow Corning) Silicone Polyether Microemulsion	2.00 Feel Enhancer
	Preservative	q.s. Preservative
	Dye	q.s. Dye
	Citric Acid (50% aq. Solution)	q.s. pH Adjuster
	<b>Total</b>	<b>100.00</b>
Procedure	<ol style="list-style-type: none"> <li>1. In a suitable vessel equipped with heating and agitation capabilities, charge Deionized Water and PenCare DP 1015 with mixing until clear.</li> <li>2. Add BIO-TERGE® AS-40 HA and AMPHOSOL® HCG with mixing. Continue mixing until homogenous and begin heating to 60 °C (140 °F).</li> <li>3. Add STEPAN-MILD® L3. Mix until homogenous.</li> <li>4. Add HALLSTAR® EGMS. Mix for at least 15-20 minutes until homogeneous. Begin cooling to room temperature.</li> <li>5. In a separate vessel, mix together Phase 2 ingredients. Add Phase 2 ingredients to Phase 1 when the temperature is under 40 °C (104 °F) to avoid loss of fragrance.</li> <li>6. Add Dow Corning® CE-1874. Mix until homogeneous.</li> <li>7. Adjust pH with citric acid solution. Add preservative and dye.</li> </ol>	
Physical Properties	Appearance at 25 °C	Off-white pearlescent viscous liquid
	pH, as is, at 25 °C	
	Viscosity at 25 °C, cps (Brookfield LVT, spindle 3, speed 6 RPM)	5.0 - 6.0 3,000 - 4,000

Storage/ Stability	4 weeks at 5°C	Stable
	4 weeks at 25°C	Stable
	4 weeks at 45°C	Stable
	Freeze/Thaw, 3 cycles	Passes

Instructions for Use Apply to wet hair and work into a lather. Rinse well with water.

External Comment

Marketing Notes: Sulfate-free is defined as not containing Alcohol sulfate or Alcohol ether sulfate as per INCI nomenclature. This definition does not include the inorganic sulfates, e.g. Sodium sulfates, used as processing aids or formed as a residual, impurity or by-product. This formulation does not contain any sulfated surfactants, Diethanolamine (DEA) or Ethylene Oxide (EO). NINOL® CAA is a multifunctional secondary surfactant that is naturally-derived (derived from plant, animal or marine sources).

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AMPHOSOL®  
STEPAN-MILD®  
NINOL®

For Additional 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).  
For ordering assistance, call our Account Service Department at 1-800-457-7673.

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