




# Formulation

Name	<b>STRUCTURED LIQUIDS TECHNOLOGY - ANTI-DANDRUFF SHAMPOO</b>	
No.	1269	
Description	This shampoo utilizes Stepan's Structured Liquids Technology to suspend Zinc Pyrithione, an active that helps to treat dandruff by reducing visible flakes on the scalp. Naturally-derived* cleansers STEPANOL® AM-CIT/MIT and STEOL® CS-270 C gently wash away dirt and oils from the hair while STEPAN-MILD® GCC provides a soft, touchable feel. *The Stepan surfactants used in this formulation are greater than 50% BCI.	
Formulation	<u>INGREDIENTS:</u>	<u>% by Weight</u> <u>Functionality</u>
	=== Phase 1 === STEPAN-MILD® GCC NINOL® CAA	10.0 Structure Agent, Emollient 2.0 Surfactant
	=== Phase 2 === STEPANOL® AM-CIT/MIT STEOL® CS-270 C Fragrance	14.0 Surfactant 1.0 Surfactant 0.5 Fragrance
	=== Phase 3 === Deionized Water Zinc Pyrithione (ZPT), 48% Dispersion	q.s. to 100.0 Diluent 2.4 Active
	=== Phase 4 === Kathon™ CG (The Dow Chemical Company) Methylchloroisothiazolinone and Methylisothiazolinone Dye Citric Acid, 50% aqueous solution	0.05 Preservative q.s. Dye q.s. pH Adjuster
	<b>Total</b>	<b>100.0</b>
Procedure	<ol style="list-style-type: none"> <li>1. In a suitable vessel equipped with heating and agitation capabilities, charge NINOL® CAA and STEPAN-MILD® GCC with mixing at 45 °C (113 °F) mix until homogenous and avoid aeration.</li> <li>2. Add STEPANOL® AM-CIT/MIT, STEOL® CS-270 C and Fragrance (if desired) with agitation. Mix until homogenous. Avoid aeration.</li> <li>3. Add Deionized Water and Zinc Pyrithione to the batch under high shear mixing a homogenizer is recommended. Mix until homogeneous, avoid aeration.</li> <li>4. Adjust pH with Citric Acid, 50% aqueous solution.</li> <li>5. Add Kathon™ CG.</li> <li>6. Add Dye as desired</li> </ol>	
Physical Properties	Appearance at 25 °C pH, as is, at 25 °C Viscosity at 25 °C (RVT A, 10 rpm, 60 sec), cps	Opaque viscous liquid 5 - 6 3,000 - 7,000
Storage/ Stability	4 weeks at 5 °C 4 weeks at 25 °C	Stable Stable

	4 weeks at 45 °C Freeze/Thaw 3 cycles	Stable Passes
Instructions for Use	For maximum dandruff control, use every time you shampoo. Wet hair, massage onto scalp and rinse. Repeat if desired.	
External Comment	Based on Stepan's in-house salon evaluation, this formulation met the performance of the market leader. Foam feel and foam volume were evaluated.	
Registered Trademarks of Stepan Company	Marketing Notes: This formulation is based on Stepan patented technology. This is a starting formulation only. No efficacy data will be provided by Stepan. Stepan has developed this formulation using Zinc Pyrithione at the level noted in the FDA Monograph. For external use only. Keep this and all drugs out of reach of children. If swallowed, get medical help or contact a Poison Control Center right away. Avoid contact with eyes. If eye contact occurs, rinse eyes thoroughly with water. BCI = 97. 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> .	
For Additional Assistance	NINOL® STEOL® STEPAN-MILD® STEPANOL®	
	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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