




Formulation

Name	SULFATE-FREE CONDITIONING ANTI-DANDRUFF SHAMPOO	
No.	1210	
Description	This sulfate-free, amide-free and Zinc Pyrithione-containing formulation provides good foam, combability, and conditioning properties.	
Formulation	INGREDIENTS:	<u>% by Weight</u> <u>Functionality</u>
	Deionized Water	q.s. to 100.00 Diluent
	Carbopol ETD 2020 Polymer	0.80 Suspending Agent
	Sodium Hydroxide - 50% Solution	0.07 pH Adjuster
	STEPAN-MILD® PCL	55.50 Primary Surfactant
	AMPHOSOL® CS-50	5.50 Secondary Surfactant
	STEPAN-MILD® L3	0.50 Conditioning Agent
	N-Hance™ 3196 Cationic Guar	0.15 Conditioning Agent
	Dow Corning® 2-1491 Emulsion	3.30 Conditioning Agent
	Zinc Pyrithione (50% active)	2.00 Antidandruff Agent
	Preservatives, Fragrance, Dye	q.s. Fragrance, Preservative
	Total	100.00
Procedure	<ol style="list-style-type: none">1. Charge Deionized Water. Activate mixing from moderate to high speed, taking precautions to avoid splashing and aeration. If necessary, mild heating may be employed to accelerate ingredient mixing.2. Slowly disperse Carbopol ETD 2020 Polymer into the vortex. Check for any clumping before adding additional polymer.3. With good agitation, continue mixing 20–30 minutes until the viscosity of the solution increases. No particles should be present.4. Add the Sodium Hydroxide - 50% Solution. The viscosity of the solution will increase. Continue mixing at low-to-moderate speed.5. Add STEPAN MILD® PCL, mixing until homogenous while avoiding aeration.6. Add AMPHOSOL® CS-50. Mix until homogenous. Avoid aeration.7. In a separate small container, weigh the N-Hance™ 3196 Cationic Guar. Then add STEPAN-MILD® L3, mixing until combined. When thoroughly mixed, add to the batch.8. Continue mixing for approximately 30 minutes.9. Add Zinc Pyrithione and continue mixing.10. Add Dow Corning® 2-1491 Emulsion, mixing for another 20 minutes.11. Use Sodium Hydroxide - 50% Solution to adjust pH to 5.5–6.5.12. Add Preservatives, Fragrance, and Dye. Continue mixing another 20 minutes until homogenous.	
Physical Properties	Appearance at 25°C	Opaque, free-flowing liquid
	pH, as is	5.0–6.5
	Viscosity at 25°C, cps	4,000 – 8,000
Storage/ Stability	Freeze/thaw, 3 cycles	Pass
	3 months at 50°C	Pass
	3 months at 40°C	Pass
	3 months at 4°C	Pass

Instructions for Use	Wet hair. Massage into scalp. Lather and then rinse. Repeat as desired.
External Comment	Marketing Notes: Sulfate free is defined by Stepan as containing no Alcohol Sulfates and no Alcohol Ether Sulfates as per the INCI Nomenclature.
Registered Trademarks of Stepan Company	STEPAN-MILD® AMPHOSOL®
For Additional Assistance	<p>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).</p> <p>For ordering assistance, call our Account Service Department at 1-800-457-7673.</p> <p>Nothing contained herein grants or extends a license, express or implied, in connection with patents, issued or pending, of the manufacturer or others. The information contained herein is based on the manufacturer's own study and the works of others. The manufacturer makes no warranties, expressed or implied, as to the accuracy, completeness, or adequacy of the information contained herein. The manufacturer shall not be liable (regardless of fault) to the vendee's employees, or anyone for any direct, special or consequential damages arising out of or in connection with the accuracy, completeness, adequacy or furnishing of such information.</p> <p>Stepan </p> <p>Stepan Company Northfield, Illinois 60093 Telephone (847) 446-7500</p>

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