



Formulation

Name	SULFATE-FREE, HIGH VISCOSITY, ANTI-DANDRUFF CRÈME SHAMPOO		
No.	1211		
Description	This sulfate-free, Zinc Pyrithione-containing formulation is suitable for use as a regular anti-dandruff shampoo. It can easily be supplemented with silicones and oils to make a conditioning anti-dandruff shampoo. Its opaque, crème-like rheology can be dispensed from a tube or bottle.		
Formulation	INGREDIENTS:	% by Weight	Functionality
	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	53.00	Primary Surfactant
	AMPHOSOL® CS-50	5.50	Secondary Surfactant
	Zinc Pyrithione (50% active)	2.00	Antidandruff Agent
	Preservatives, Fragrance, Dye	q.s.	Fragrance, Preservative
	Total	100.00	
Procedure	<div>1. Charge Deionized Water. Increase mixing speed from moderate to high speed, taking precautions to avoid splashing and aeration. If necessary, mild heating may be employed to accelerate ingredient mixing.</div> <div>2. Slowly disperse Carbopol ETD 2020 Polymer into the vortex. Check for any clumping before adding additional polymer.</div> <div>3. With good agitation, continue mixing 20–30 minutes until the viscosity of the solution increases. No particles should be present.</div> <div>4. Add the Sodium Hydroxide - 50% Solution. The viscosity of the solution will increase. Continue mixing at a low-to-moderate speed.</div> <div>5. Add STEPAN MILD® PCL, mixing until homogenous while avoiding aeration.</div> <div>6. Add AMPHOSOL® CS-50. Mix until homogenous. Avoid aeration.</div> <div>7. Add Zinc Pyrithione. Continue mixing.</div> <div>8. Use Sodium Hydroxide - 50% Solution to adjust pH to 5.5–6.5.</div> <div>9. Add Preservatives, Fragrance, and Dye. Continue mixing another 20 minutes.</div>		
Physical Properties	Appearance at 25°C	Opaque, free-flowing liquid	
	pH, as is	5.0–6.5	
	Viscosity at 25°C, cps	15,000–30,000	
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		

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Alcohol Ether Sulfates as per the INCI Nomenclature.

STEPAN-MILD®
AMPHOSOL®

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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Stepan 

Stepan Company
Northfield, Illinois 60093
Telephone (847) 446-7500

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