



# Formulation

Name	<b>ECONOMY SULFATE-FREE* SHAMPOO</b>	
No.	1112	
Description	This formulation is made with all naturally-derived surfactants and provides good foam and easy rinse-off.	
Formulation	<b>INGREDIENTS:</b>	<b><u>% by Weight</u>   <u>Functionality</u></b>
	ALPHA-STEP® PC-48	13.50 Primary Surfactant
	AMPHOSOL® CDB Special	10.00 Secondary Surfactant
	Sodium Chloride	1.50 Viscosity Adjuster
	Kathon CG (Rohm and Haas) Methylchloroisothiazolinone and Methylisothiazolinone	0.05 Preservative
	Citric Acid (25%)	q.s. pH Adjuster
	Fragrance and Color	q.s. Additive
	Water	q.s. to 100.00 Carrier
	<b>Total</b>	<b>100.00</b>
Procedure	1) Add Water to a container and turn on the agitator. Add surfactants and mix till homogeneous. 2) Add Sodium Chloride to adjust viscosity. Add Fragrance and Dye under mixing. Adjust pH with Citric Acid or Sodium Hydroxide to pH between 5.0–5.5.	
Physical Properties	pH, as is	5.0–5.5
	Viscosity at 25°C	3,500–6,200 cps
	Appearance at 25°C	Clear viscous liquid
Storage/Stability	4 weeks at 25°C	Stable
	4 weeks at 50°C	Stable
	Freeze/thaw 3 cycles	Requires gentle mixing after freezing.
Instructions for Use	Apply the product on wet hair. Lather, then rinse thoroughly.	
External Comment	Marketing Notes: Sulfate-Free* means containing no alcohol sulfate or alcohol ether sulfate per INCI nomenclature.	
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