**WATERLESS (LOW ENERGY) SHAMPOO**

**Name**

WATERLESS (LOW ENERGY) SHAMPOO

**No.**

1268

**Description**

This low energy shampoo employs the use of a self-foaming pump to instantly create foam upon dispensing, thus saving water and time when used. This shampoo can be used either as a low energy rinse-off shampoo or as a waterless shampoo that can be applied to the hair and towel dried, achieving a similar effect to conventional dry shampoos.

**Formulation**

<table>
<thead>
<tr>
<th>INGREDIENTS:</th>
<th>% by Weight</th>
<th>Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td><em><strong>Phase 1</strong></em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deionized Water</td>
<td>q.s. to 100.00</td>
<td>Carrier</td>
</tr>
<tr>
<td>STEPANOL® AM-BA</td>
<td>5.40</td>
<td>Primary Surfactant</td>
</tr>
<tr>
<td>AMPHOSOL® HCA-HP</td>
<td>2.50</td>
<td>Secondary Surfactant</td>
</tr>
<tr>
<td>STEPAN-MILD® L3</td>
<td>0.25</td>
<td>Feel Enhancer</td>
</tr>
<tr>
<td><em><strong>Phase 2</strong></em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citric Acid, 50% solution</td>
<td>q.s.</td>
<td>pH Adjuster</td>
</tr>
<tr>
<td>Sodium Hydroxide, 50% solution</td>
<td>q.s.</td>
<td>pH Adjuster</td>
</tr>
<tr>
<td>Fragrance, Dye &amp; Preservative</td>
<td>q.s.</td>
<td>Additives</td>
</tr>
</tbody>
</table>

**Total** 100.00

**Procedure**

1. In a suitable vessel equipped with agitation, charge Phase 1 ingredients. Mix until clear and homogenous.
2. Adjust pH with either Citric Acid, 50% solution or Sodium Hydroxide, 50% solution to pH 5-6.
3. Add Fragrance, Dye, and Preservative as desired.

**Physical Properties**

- Appearance at 25°C: Clear liquid
- pH, as is: 5.0-6.0
- Viscosity at 25 ºC, cps: Water-thin

**Storage/ Stability**

- 4 weeks at 25°C: Stable
- 4 weeks at 4°C: Stable
- 4 weeks at 45°C: Stable
- Freeze/thaw, 3 cycles: Passes

**Instructions for Use**

As a rinse-off shampoo: Dispense 1-2 pumps of foam into Palm of hand. Apply to hair. Rinse thoroughly. As a leave-in waterless shampoo: Dispense 1-2 pumps of foam into palm of hand. Apply to hair, concentrating towards roots. Use towel to dry the hair. Style as desired.

**External Comment**

Marketing Notes: BCI = 87. 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 www.stepan.com.

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