**Formulation**

**Name**
SULFATE-FREE SHAMPOO

**No.**
1074

**Description**
This shampoo provides good cleansing property, good foam, and nice wet and dry combability.

**Formulation**

**INGREDIENTS:**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>% by Weight</th>
<th>Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deionized Water</td>
<td>q.s. to 100.0</td>
<td>Solvent</td>
</tr>
<tr>
<td>PEG-150 Distearate (HALLSTAR® PEG 6000 DS)</td>
<td>1.2</td>
<td>Thickener</td>
</tr>
<tr>
<td>BIO-TERGE® AS-40 CG-P</td>
<td>25.6</td>
<td>Primary Surfactant</td>
</tr>
<tr>
<td>STEPAN-MILD® L3</td>
<td>2.0</td>
<td>Secondary Surfactant</td>
</tr>
<tr>
<td>SilPlex J-2S (Silicone Quaternium-20), Siltec LLC</td>
<td>1.0</td>
<td>Conditioning Agent</td>
</tr>
<tr>
<td>Preservative, Dye and Fragrance</td>
<td>q.s.</td>
<td>Additive</td>
</tr>
<tr>
<td>Sodium Chloride</td>
<td>q.s.</td>
<td>Viscosity Modifier</td>
</tr>
<tr>
<td>Sodium Hydroxide</td>
<td>q.s.</td>
<td>pH Modifier</td>
</tr>
<tr>
<td>Citric Acid</td>
<td>q.s.</td>
<td>pH Modifier</td>
</tr>
</tbody>
</table>

**Total**

**Procedure**

In a separate container, combine Deionized Water, PEG-150 Distearate, BIO-TERGE® AS-40 CG-P, and STEPAN-MILD® L3. Start mixing and heating to 155°F–160°F. When solution is clear, start cooling to room temperature. At 90°F, add SilPlex J-2S. Mix well. Add Preservative, Fragrance, and Dye. Mix well. Adjust pH with Sodium Hydroxide or Citric Acid, and viscosity with Sodium Chloride.

**Physical Properties**

- Appearance at 25°C: clear
- pH, as is: 5.8 - 6.5
- Viscosity at 25°C, cps: 8,000 - 10,000

**Instructions for Use**

Massage into wet hair, lather, then rinse thoroughly. Repeat if desired.

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- BIO-TERGE®
- STEPAN-MILD®

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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