ECOLOGY LIQUID DISH DETERGENT WITH SLS/SLES-3/LAURAMINE OXIDE

No. 1188

This economy liquid dish detergent (LDL) contains no Cocamide DEA surfactants. It is composed of two primary surfactants, STEPANOL® WA-EXTRA (Sodium Lauryl Sulfate or SLS) and STEOL® CS-460 (Sodium Laureth Sulfate with 3 moles Ethylene Oxide or SLES-3), and one secondary surfactant, AMMONYX® LO (Lauramine Oxide).

**Formulation**

**INGREDIENTS:**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>% by Weight</th>
<th>Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deionized Water</td>
<td>69.01%</td>
<td>Diluent</td>
</tr>
<tr>
<td>STEPANOL® WA-EXTRA</td>
<td>17.24%</td>
<td>Primary Surfactant</td>
</tr>
<tr>
<td>STEOL® CS-460</td>
<td>8.33%</td>
<td>Primary Surfactant</td>
</tr>
<tr>
<td>AMMONYX® LO</td>
<td>3.67%</td>
<td>Secondary Surfactant</td>
</tr>
<tr>
<td>Sodium Chloride</td>
<td>1.75%</td>
<td>Viscosity Builder</td>
</tr>
<tr>
<td>Citric Acid or Sodium Hydroxide</td>
<td>q.s.</td>
<td>pH Adjuster</td>
</tr>
<tr>
<td>Preservative</td>
<td>q.s.</td>
<td>Preservative</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100.00%</td>
<td></td>
</tr>
</tbody>
</table>

**Procedure**

1. Charge Deionized Water.
2. Add STEPANOL® WA-EXTRA and STEOL® CS-460. Mix until homogenous.
3. Add AMMONYX® LO, mixing until homogenous.
4. Slowly add Sodium Chloride to thicken. Amount of Sodium Chloride will vary depending upon the target viscosity. Mix until clear.
5. Adjust pH with Citric Acid or Sodium Hydroxide as necessary.
6. Add Preservative and mix until homogenous.

**Physical Properties**

- **Appearance at 25°C**: Clear liquid
- **Viscosity at 25°C, cps**: 400–650
- **Actives, %**: 11.1
- **Solids, %**: 12.9
- **pH, as is**: 7.5–8.5
- **Density, lbs/gal**: 8.5
- **Flash Point, °F (PMCC)**: >200

**Storage/ Stability**

- **Freeze/Thaw (3 cycles)**: Pass
- **4 weeks at 4 °C**: Stable
- **4 weeks at 25 °C**: Stable
- **4 weeks at 50 °C**: Stable

**Instructions for Use**

Squirt a small amount of detergent into sink. Fill sink with warm/hot water.

**Comment**

Marketing Notes: AMMONYX® LO is an approved ingredient on www.cleangredients.org. This formulation does not contain Nonylphenol Ethoxylates (NPEs) or Cocamide DEA.
Registered Trademarks of Stepan Company

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.

The information contained herein is based on the manufacturer’s own study and the works of others and is subject to change without prior notice. The information is not intended to be all-inclusive, including as to the manner and conditions of use, handling, storage or disposal or other factors that may involve additional legal, environmental, safety or performance considerations. Nothing contained herein grants or extends a license, express or implied, in connection with any patents issued or pending of the manufacturer or others, or shall be construed as a recommendation to infringe any patents or to violate any applicable laws. **STEPAN COMPANY MAKES NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR USE, AND NO WARRANTY OR GUARANTY OF ANY OTHER KIND, EXPRESS OR IMPLIED, IS MADE, INCLUDING REGARDING PERFORMANCE, SAFETY, SUITABILITY, STABILITY, ACCURACY, COMPLETENESS, ADEQUACY OR OTHERWISE.** Stepan Company (and its employees, subsidiaries and affiliates) shall not be liable (regardless of fault) to the vendee, its employees, or any other party in respect of this information, including in respect of its accuracy, completeness, adequacy, furnishing, use, or reliance upon, and the vendee assumes and releases Stepan Company (and its employees, subsidiaries and affiliates) from all liability, whether in tort, contract or otherwise.