



# Formulation

Name	<b>ECONOMY LIQUID DISH DETERGENT WITH SLS/SLES-3/LAURAMINE OXIDE</b>	
No.	1188	
Description	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	<b>INGREDIENTS:</b>	<b>% by Weight    Functionality</b>
	Deionized Water	69.01% Diluent
	STEPANOL® WA-EXTRA	17.24% Primary Surfactant
	STEOL® CS-460	8.33% Primary Surfactant
	AMMONYX® LO	3.67% Secondary Surfactant
	Sodium Chloride	1.75% Viscosity Builder
	Citric Acid or Sodium Hydroxide	q.s. pH Adjuster
	Preservative	q.s. Preservative
	<b>Total</b>	<b>100.00%</b>
Procedure	<ol style="list-style-type: none"> <li>1. Charge Deionized Water.</li> <li>2. Add STEPANOL® WA-EXTRA and STEOL® CS-460. Mix until homogenous.</li> <li>3. Add AMMONYX® LO, mixing until homogenous.</li> <li>4. Slowly add Sodium Chloride to thicken. Amount of Sodium Chloride will vary depending upon the target viscosity. Mix until clear.</li> <li>5. Adjust pH with Citric Acid or Sodium Hydroxide as necessary.</li> <li>8. Add Preservative and mix until homogenous.</li> </ol>	
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.	
External Comment	Marketing Notes: AMMONYX® LO is an approved ingredient on <a href="http://www.cleangredients.org">www.cleangredients.org</a> . This formulation does not contain Nonylphenol Ethoxylates (NPEs) or Cocamide DEA.	

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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).  
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