

Name LIQUID HAND SOAP 149 No.

Description This formulation is an all-purpose liquid hand soap formulated without Diethanolamide (DEA Amide).

Formulation

INGREDIENTS: % by Weight

=== Phase 1 === Deionized Water g.s. to 100.0 BIO-TERGE® AS-40 (or BIO-TERGE® AS-40 HP) 10.00 STEPANOL® AM 8.74 STEPANOL® WAT 6.25 NINOL® M10 3.00

=== Phase 2 ===

Citric Acid q.s. Fragrance, Dye, & Preservative q.s. Sodium Chloride q.s. Sodium Hydroxide q.s.

Total 100.0

Procedure

- 1. Combine all components in Phase 1 and mix until homogeneous.
- 2. Adjust pH to 5.5 6.5 with Citric Acid.
- 3. Add Fragrance, Dye, and Preservative, if desired.
- 4. Adjust to desired viscosity with Sodium Chloride and pH with Citric Acid or Sodium Hydroxide. *Note: When formulating with BIO-TERGE® AS-40 HP, a greater amount of Citric Acid may be needed to adjust the pH within the recommended range as noted, than when formulating with BIO-TERGE® AS-40.

Physical **Properties**

Clear yellow liquid Appearance as is pH, as is 5.5-6.5 Viscosity Profile: 0.0% Sodium Chloride, cps 10 2.0% Sodium Chloride, cps 430 3.0% Sodium Chloride, cps 2300

Storage/ Stability

Stable 2 weeks at 50°C Freeze/Thaw, 3 cycles Pass

Instructions for Use

Apply to wet skin, lather and rinse.

01/19/17, Updated 12/18/19: Stability testing information noted above was for this formulation containing BIO-TERGE® AS-40. BIO-TERGE® AS-40 HP, an excess alkalinity preserved surfactant of the same chemistry, can be substituted into this formulation. Based on chemistry, Personal Care R&D does not anticipate that the stability or performance of the formulation will be altered by using BIO-TERGE® AS-40 HP, however it should be noted that a greater amount of Citric Acid may be needed to reach the pH target (compared to the amount needed when formulating with BIO-TERGE® AS-40).

External Comment

Marketing Notes: This formulation does not contain Cocamide DEA or other DEA Amides. STEPANOL® WAT-K may be a potential substitute for STEPANOL® WAT in this formulation. It should be noted that stability testing using this STEPANOL® WAT-K has not been completed for this formulation. The substitution may yield slightly different physical properties.

Registered Trademarks of Stepan Company BIO-TERGE® STEPANOL® NINOL®

For Additional Assistance 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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