Stepan's Solution to Preservative Concerns

Excess Alkalinity Preservation

Customer Need:

Global safety and environmental concerns associated with traditional preservatives and preservative systems have prompted an increase in customer requests for surfactants that do not require a preservative (e.g., high active ether sulfates), have alternative preservatives, or are self-preserving.

Stepan Company has been promoting a few surfactant offerings that are self-preserved through the use of excess alkalinity, allowing formulators increased flexibility when developing their finished products.

Definition:

Stepan defines a product to be preserved by excess alkalinity if it:

- Contains free sodium hydroxide (NaOH),
- No external preservative is added
- The efficacy is confirmed by microbial challenge testing, and
- pH is typically between 11.0 and 13.0.

Advantages:

The many advantages with using these self-preserving surfactants include:

- Robust microbial protection
- Likely reduction in sanitization/cleaning cost and time compared to other preservatives (e.g., CIT/MIT)
- Potential reduction in Regulatory assessment time and no limitation in certification approval due to a prohibited preservative

  Example: Safer Choice Certification - AMPHOSOL® HCA-HP, AMPHOSOL® HCG-HP and STEPANOL® WA-EXTRA HP are Cleangredient-approved for use as a surfactant in U.S. EPA Safer Choice-approved products.

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Innovative Chemical Solutions for a Cleaner, Healthier, More Energy Efficient World

Stepan Company - Excess Alkalinity Surfactants

North America

Stepan Trade Name	INCI Name	Actives (%)	Form (25 °C)	BCI	Typical pH	Remarks
BIO-TERGE® AS-40 HA	Sodium C14-16 Olefin Sulfonate (AOS)	39.0	Liquid	0	11.7 (10% H_2O)	Sulfate-free
STEPANOL® WA-EXTRA HP	Sodium Lauryl Sulfate (SLS)	30.0	Liquid	100	11.3 (10% H_2O)	Cleangredient-approved
AMPHOSOL® CDB-HP	Cetyl Betaine	30	Liquid	78	12.0 (10% H_20)	Sulfate-free
AMPHOSOL® HCA-HP	Cocamidopropyl Betaine (CAPB)	31.0	Liquid	64	12.0 (as is)	Sulfate-free Cleangredient-approved
AMPHOSOL® HCG-HP	Cocamidopropyl Betaine (CAPB)	31.0	Liquid	64	12.0 (as is)	Sulfate-free Cleangredient-approved
STEOL® CS-130 HP	Sodium Laureth Sulfate (SLES-1)	25.0	Liquid	86	11.5 (10% H_2O)	
STEOL® CS-230 PC HP	Sodium Laureth Sulfate (SLES-2)	27.5	Liquid	75	11.5 (10% H_2O)	
STEOL® CS-330 HP	Sodium Laureth Sulfate (SLES-3)	28.5	Liquid	67	12.0 (10% H_2O)	
STEPANBLEND® FF40	Sodium C14-16 Olefin Sulfonate (AOS), Cocamide MIPA, Cocamidopropyl Betaine	38 (solids)	Liquid	20	11.5 (10% H_2O)	Sulfate-free DEA free 1,4-Dioxane/ EO free
COMING SOON						
AMPHOSOL® LB HP	Lauramidopropyl Betaine (LAPB)	TBD	Liquid	TBD	TBD	Sulfate-free

Europe

BIO-TERGE® AS-40 HASB	Sodium C14-16 Olefin Sulfonate (AOS)	39.0	Liquid	0	11.7 (10% H_2O)	Sulfate-free
STEOL® CS-230 HA	Sodium Laureth Sulfate (SLES-2)	27.5	Liquid	75	11.0 (10% H_2O)	
STEOL® CS-330 HA	Sodium Laureth Sulfate (SLES-3)	28.0	Liquid	67	11.3 (5% H_2O)	
STEPANOL® WA-EXTRA-HA	Sodium Lauryl Sulfate (SLS)	30.0	Liquid	100	11.3 (10% H_2O)	Ecocert-approved

For more information on these surfactants, including formulation considerations and additional guidance, please contact North America Technical Service at techserv@stepan.com.

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