

STEPAN-MILD® GCC

A Natural*, Food-Grade Thickener for Personal Care

STEPAN-MILD® GCC is a 100% active thickener for aqueous liquid cleansing products. The product is a Glyceryl Caprylate/Caprates made from 100% renewable carbon. It is made by esterification of glycerin from vegetable oil sources and medium chain fatty acid from coconut or palm kernel oil.

INCI Name: Glyceryl Caprylate/Caprates

Physical Form @ 25°C: Off-white liquid to soft paste

Use Level: 0.5-4.0%

Multi-Functional:

- Thickener
- Re-fattening agent
- Foam enhancer
- Solubilizing agent
- Co-emulsifier

Applications:

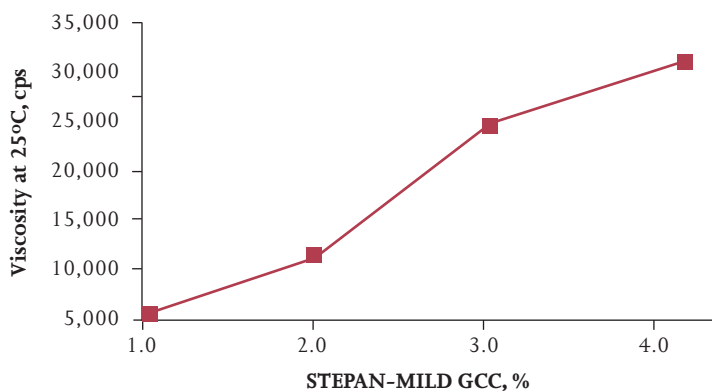
- Shampoos
- Body washes
- Creams and lotions
- Liquid soaps
- Facial cleansers

Key Attributes:

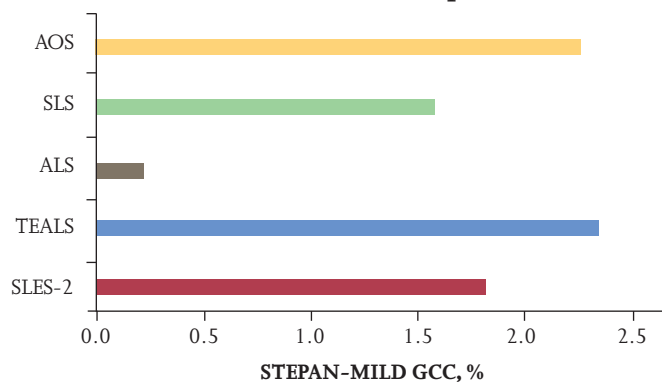
- Affirmed GRAS – permitted as additive in food and nutritional products
- Safe – mild, non-sensitizing and non-irritating to eyes and skin
- PEG and EO/PO-free —> No 1,4 dioxane
- Nitrogen-free —> No nitrosamines
- Can be incorporated in cold mix at any step of the process
- Good processability – shows no gelation

Thickening Profile

Viscosity Building Properties in SLES-2/CAPB System
(15% total actives, 4:1 ratio)



Amount of STEPAN-MILD GCC to Thicken
Surfactant/CAPB Systems (15% total actives, 4:1 ratio)
to about 6,000 cps



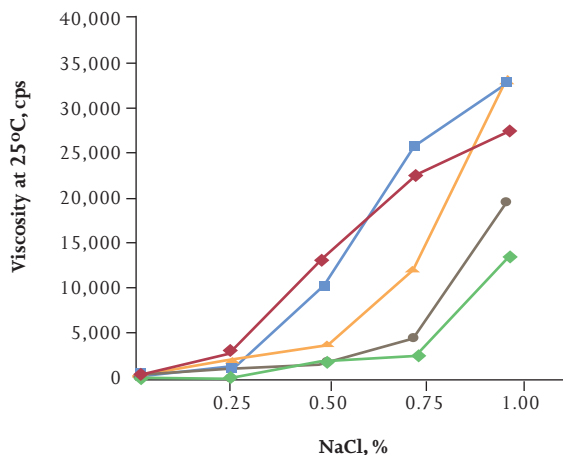
Abbreviation	STEPAN Trade Name	INCI Name
SLES-2	STEOL® CS-230	Sodium Laureth Sulfate
CAPB	AMPHOSOL® HCA	Cocoamidopropyl Betaine
AOS	BIO-TERGE® AS-40 CG	Sodium C14-16 Olefin Sulfonate
SLS	STEPANOL® WA-EXTRA	Sodium Lauryl Sulfate
ALS	STEPANOL® AM	Ammonium Lauryl Sulfate
TEALS	STEPANOL® WAT-K	TEA Lauryl Sulfate
Cocamide MEA	NINOL® COMF	Cocamide MEA
Cocamide DEA	NINOL® 40-CO	Cocamide DEA



* Natural defined as renewable carbon content of 100%

Performance Advantages

Effective Viscosity Building v. Traditional Thickeners

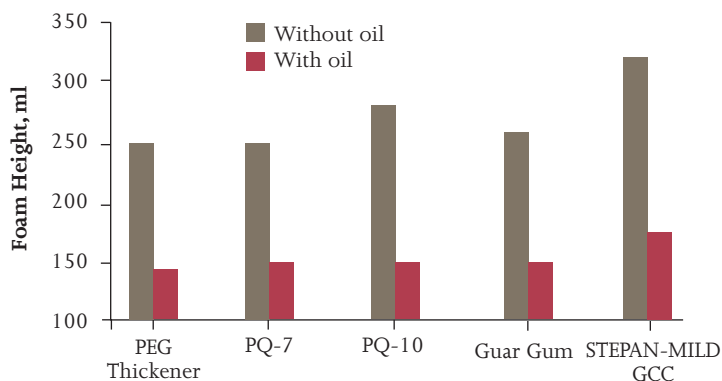


- PEG Thickener (1.0%)
- ◆— STEPAN-MILD GCC (1.0%)
- ▲— Guar Gum (0.5%)
- PQ-10 (0.25%)
- ◇— PQ-7 (0.25%)

Viscosity Building in SLES-2/CAPB System at 15% Total Actives (4:1 Ratio). Thickener Amount in Parentheses.

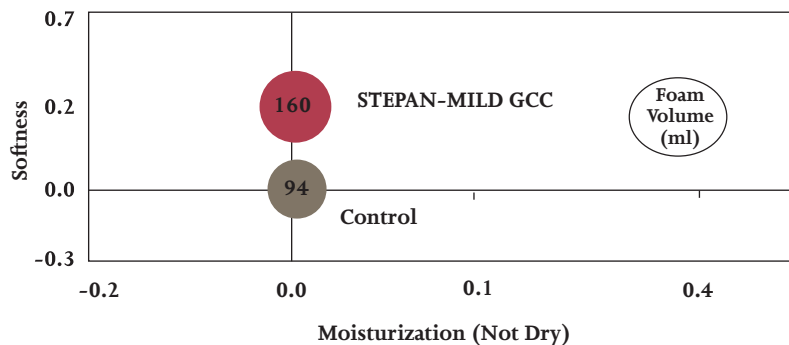
Enhanced Foaming

v. Traditional Thickeners



Shake Foam Studies on Viscosity Formulations Shown Above.

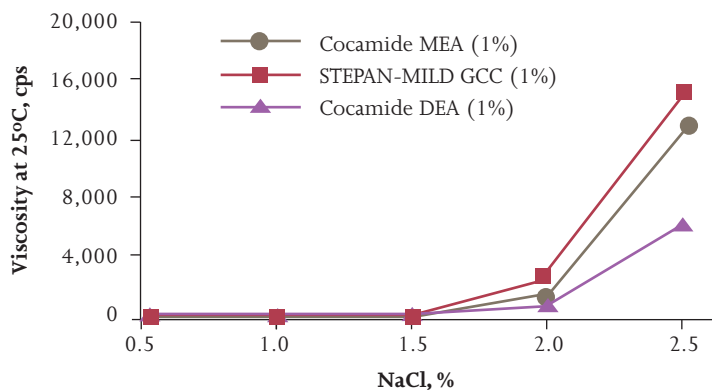
v. Control



Hand Foam Studies Comparing a 12:3 SLES-2/CAPB System (Control) v. a 12:3:3 SLES-2/CAPB/STEPAN-MILD GCC System.

Replacement for MEA & DEA Amides

STEPAN-MILD GCC's advantage is natural and no nitrosamines



Viscosity Building in SLES-2/Amide Systems at 15% Total Actives (14:1 Ratio) v. an SLES-2/STEPAN-MILD GCC System at 15% Total Actives (14:1 Ratio).

Recommended formulations are available at www.stepan.com:

- Mild, Amide-Free Clear Body Wash
- Natural, EO-Free Facial Cleanser
- Sulfate-Free, Conditioning Shampoo
- Mild, Amide-Free Baby Shampoo

Patent Pending

For further technical inquiries contact Stepan Technical Service at 1-800-745-7837 or at techserv@stepan.com.

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