

# TEGOSOFT® LSE 65 K Soft

Hydrophilic Emollients

- Blend of sucrose esters with fatty acids from coconut oil
- Provides a pleasant re-fattening effect
- Increases foam density and creaminess
- Increases the viscosity in common surfactant combinations
- Vegetable source
- Preservative free
- PEG-free
- Conforms with the eco-label criteria for shampoos and body washes

Personal Care

## INCI name (CTFA name)

Sucrose Cocoate

### Chemical and physical properties (not part of specifications)

Form	paste
Colour	light yellow

### Properties

TEGOSOFT® LSE 65 K Soft is a blend of sucrose esters with fatty acid esters from coconut oil produced from natural, renewable sources: sucrose and vegetable fat. It is solvent-free, readily biodegradable (aerobic & anaerobic) and has low aquatic toxicity. It conforms to eco-label criteria for shampoos and body washes.

TEGOSOFT® LSE 65 K Soft is a re-fattening agent designed for use in skin and hair cleansing formulations providing the following advantages:

- very mild to skin and eyes
- improves skin feel
  - during washing process
  - after feel (softness and smoothness)

- improves foam creaminess and stability
- thickening properties in common surfactant combinations
- suitable for clear products
- foam stabilizing

### Improvement of foam quality and skin feel

Figure 1 shows the results of a sensory hand wash test in comparison to the market standard PEG-7 Glyceryl Cocoate.

TEGOSOFT® LSE 65 K Soft outperforms the market standard in the essential properties foam creaminess and skin feel.

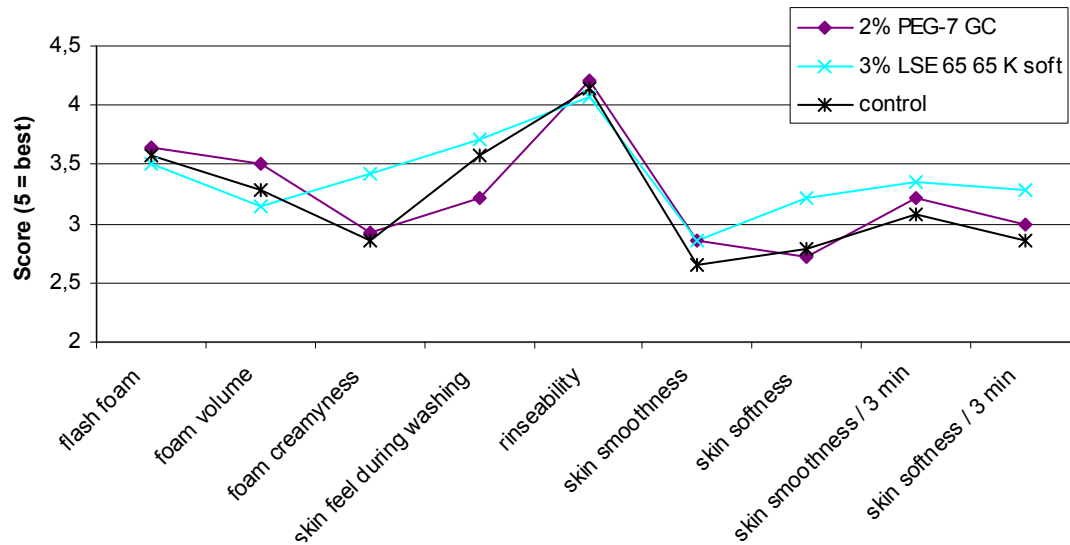


Figure 1: results of sensory hand wash tests 9 % SLES / 3 % CAPB; 7 Panelists

## Thickening property

Figure 2 shows an increasing viscosity effect due to the addition of TEGOSOFT® LSE 65 K Soft into a surfactant base, comprising of 11.25 % SLES, 3.75 % CAPB and 0.7 % NaCl in comparison to the market standard, PEG-7 Glyceryl Cocoate.

Low concentrations of TEGOSOFT® LSE 65 K Soft appreciably increase viscosity while PEG-7 Glyceryl Cocoate does not affect viscosity.

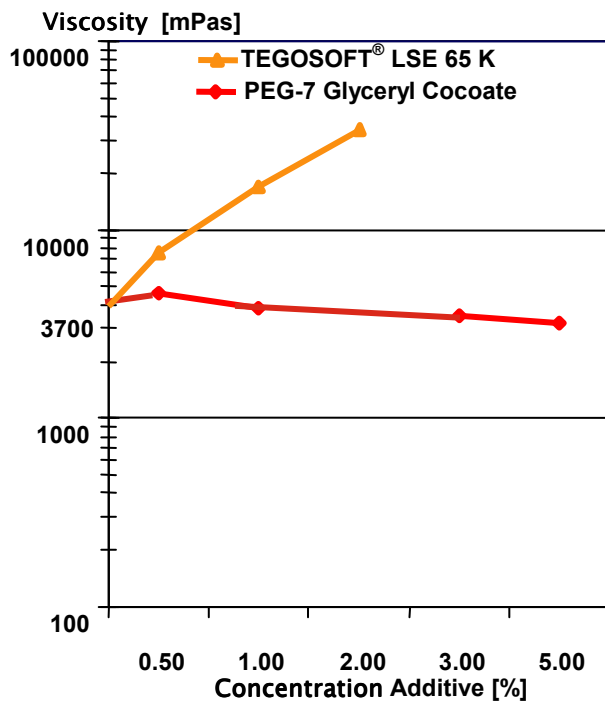


Figure 2: Thickening effect of TEGOSOFT® LSE 65 K  
9 % SLES / 3 % CAPB / 0.8 % NaCl

## Application

TEGOSOFT® LSE 65 K Soft can be added to hair and body cleansing formulations and is suitable for clear products. It is especially recommended for use in very mild cleansing products. It can also be used as moisturizers in skin care products (creams and lotions).

## Preparation

With regard to the chemical characteristics of the products we recommend that TEGOSOFT® LSE 65 K Soft is heated during processing to approx. 40 °C and thoroughly mixed before processing.

It should be added directly to the concentrated primary surfactant.

## Storage

At higher temperatures (> 25 °C) TEGOSOFT® LSE 65 K Soft might separate into two phases of different viscosities. If this occurs the sample should be heated to 40 °C and mixed thoroughly before use. This does not impact product performance.

## Hints for analytical measurements / non-usage of complete package

If the total container of TEGOSOFT® LSE 65 K Soft is not used (mainly for analytical purpose), we recommend the following mixing procedure in order to achieve similar analytical results as compared to the certificate of analysis:

- Temper the drum 10 – 15 hours at 45 – 50 °C.
- In order to avoid water loss, open the pail without removing the lid completely.
- Mix for 2 hours with a simple cement mixing blade (see figure 3) at 300 – 500 rpm.
- Move the blade up and down during the mixing procedure.
- Take the sample directly after mixing.

Note: This procedure reduces water loss by less than 0.3 %.



Figure 3: Mixing equipment (cement mixer, l = 14 cm) to homogenize TEGOSOFT® LSE 65 K soft (mainly before analytical tests)

### Recommended usage concentration

for cleansing formulations	0.7 – 4.0 %
for emulsions	3.0 – 5.0 %

### Packaging

400 kg pallet (16 x 25 kg can)

### Hazardous goods classification

Information concerning

- classification and labelling according to regulations for transport and for dangerous substances
- protective measures for storage and handling
- measures in case of accidents and fires
- toxicity and ecological effects

is provided in our material safety data sheets.

### Guide Line Formulations

<b>Shower Gel for Sensitive Skin KA 05272</b>	
Sodium Laureth Sulfate (28 %)	15.0 %
TEGOSOFT® GC (PEG-7 Glyceryl Cocoate)	1.0 %
TEGOSOFT® LSE 65 K Soft	1.5 %
REWOPOL® SB CS 50 B (Disodium Laurylcitrate Sulfosuccinate; Sodium Laureth Sulfate)	7.5 %
Water	61.5 %
TEGO® Betain F 50 (Cocamidopropyl Betaine)	9.0 %
TEGO® Betain 810 (Capryl/Capramidopropyl Betaine)	4.0 %
ANTIL® 200 (PEG-200 Hydrogenated Glyceryl Palmate; PEG-7 Glyceryl Cocoate)	2.5 %
Preservative, Perfume	q.s.
<b>Preparation:</b> Mix the ingredients in the given order. Adjust the pH value with Citric Acid to 6.0.	

<b>Shower Bath – PEG and Sulfate-free FM 11124</b>	
REWOTERIC® AM C (Sodium Cocoamphoacetate)	15.0 %
REWOPOL® SB F 12 P (Disodium Lauryl Sulfosuccinate)	3.8 %
Water	61.7 %
TEGOSOFT® LSE 65 K Soft	2.5 %
ANTIL® HS 60 (Cocamidopropyl Betaine, Glyceryl Laurate)	4.0 %
TEGO® Betain F 50 (Cocamidopropyl Betaine)	13.0 %
Preservative, Perfume	q.s.
<b>Preparation:</b> Mix the ingredients in the given order at approximately 30 °C. Adjust the pH value with Citric Acid to 5.5. Finally add preservatives as required.	

<b>Clear Baby Bubble Bath, Sulfate-free ST-BB 1</b>	
TEGOSOFT® GC (PEG-7 Glyceryl Cocoate)	2.0 %
Bisabolol	0.1 %
TEGO® Betain F 50 (Cocamidopropyl Betaine)	40.0 %
REWOPOL® SB FA 30 B (Disodium Laureth Sulfosuccinate)	15.0 %
TEGOSOFT® LSE 65 K Soft	2.0 %
Panthenol	0.2 %
Water	36.9 %
ANTIL® 171 (PEG-18 Glyceryl Oleate/Cocoate)	3.0 %
REWOMID® SPA (Isostearamide MIPA)	0.8 %
Preservative, Perfume	q.s.
<b>Preparation:</b> Mix the ingredients in the given order and stir while slightly warming up. Adjust the pH value at room temperature with Citric Acid to 5.5 and the desired viscosity with NaCl. Finally add preservatives as required.	

<b>2 in1 Shampoo for Kids VK 54/4</b>	
Sodium Laureth Sulfate (28 %)	20.0 %
REWOPOL® SB FA 30 B (Disodium Laureth Sulfosuccinate)	6.0 %
TEGOSOFT® LSE 65 K Soft	2.5 %
ABIL® Quat 3272 (Quaternium-80)	2.0 %
Water	54.9 %
Polyquaternium-10 (Polymer JR 400, Amerchol)	0.1 %
TEGO® Betain F 50 (Cocamidopropyl Betaine)	7.0 %
VARISOFT® PATC (Palmitamidopropyltrimonium Chloride)	2.5 %
REWODERM® LI S 80 (PEG-200 Hydrogenated Glyceryl Palmate; PEG-7 Glyceryl Cocoate)	3.0 %
TEGO® Pearl N 100 (Glycol Distearate; Steareth-4)	2.0 %
Preservative, Perfume	q.s.
<b>Preparation:</b> Stir the PQ-10 into the water and let it swell. Mix the ingredients in the given order.	

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