

TEGO® Betain F 50

Concentrated Cocamidopropyl Betaine

- Preservative-free
- High active concentration
- Best purity
- Mild
- Good foaming properties
- Easy to be thickened
- Synergistic thickening effect

Personal Care

INCI Name (CTFA name)

Cocamidopropyl Betaine

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

Form	clear, low-viscous liquid
Colour	light
Active matter	~ 38 %

Properties

TEGO® Betain F 50 is higher concentrated than common products with 30 % active matter.

Figure 1 shows the solids content above which pure aqueous amidoalkyl betaine solutions turn to gel. This solids content value is shown as a function of the alkyl chain length.

While standard CAPB is a gel at a solids level above 37 %, TEGO® Betain F 50 remains liquid and easy to handle up to more than 48% solids.

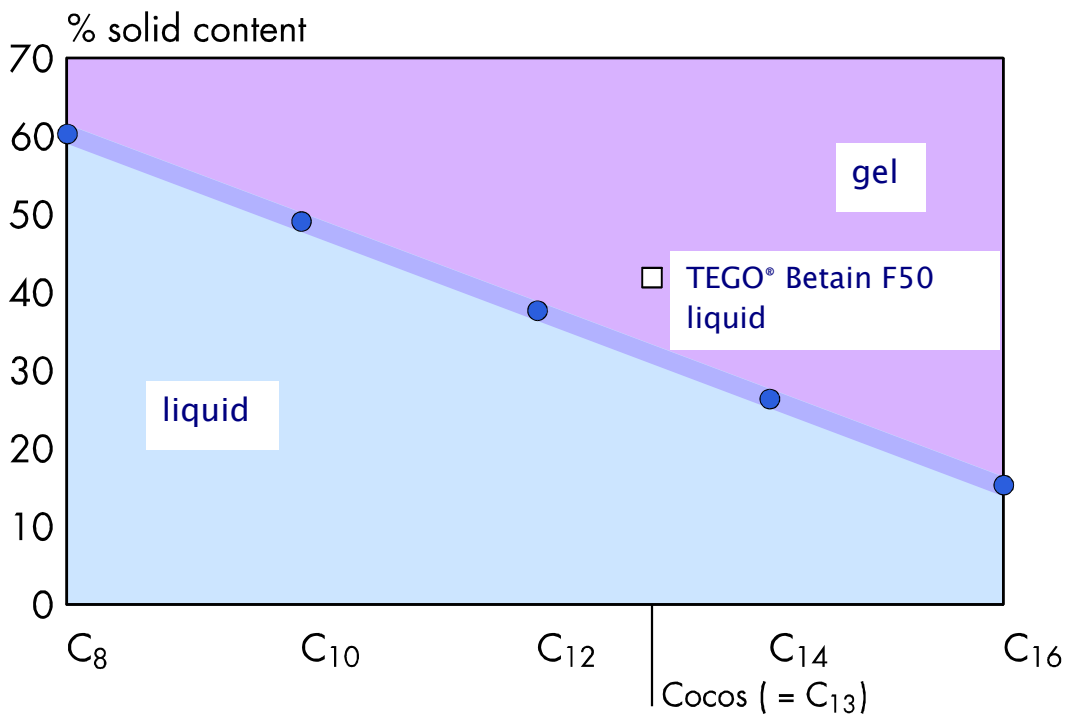
Due to a patented process it is possible to improve the purity of this product significantly. TEGO® Betain F 50 is characterized by a very low level of amidoamine and chloroacetic acids.

A good microbiological stability is obtained by the relatively high solids level. Due to this TEGO® Betain F 50 is delivered even in "bulk" without any preservatives. This increases the variability for formulation.

All technical properties relevant to application characteristics are identical with the common cocamidopropyl betaines.

The elevated active concentration provides reduced storage and transport expenses.

Figure 1:



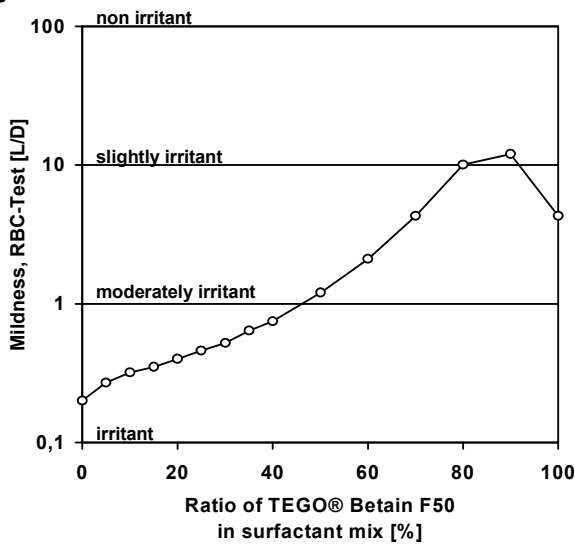
Application

TEGO® Betain F 50 is used as very mild amphoteric surfactant in all products for skin and hair cleansing, like shampoos, shower and foam baths and liquid soaps.

Fig. 2 shows the mitigating effect to SLES by TEGO® Betain F 50. These data are recorded by in-vitro RBC Test (*Pape et al., Drug Res. 40, 498 (1990)*).

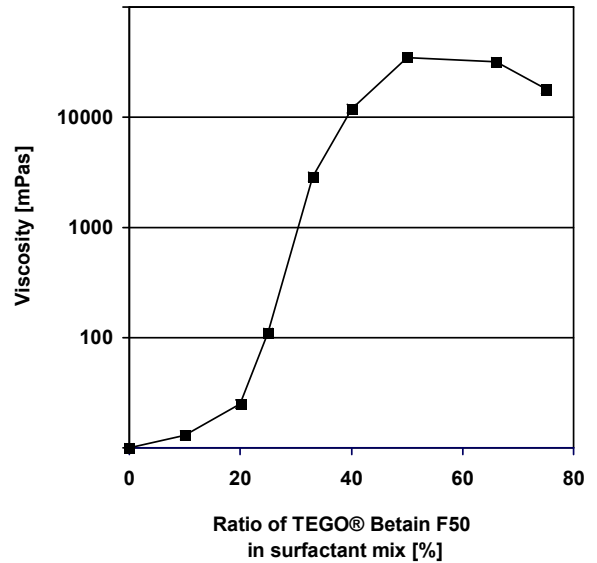
With increasing ratio of TEGO® Betain F 50 in the surfactant mixture the mildness is increasing. Best mildness is obtained with 80 to 90 % TEGO® Betain F 50 in surfactant actives.

Figure 2:



TEGO® Betain F 50 provides a strong thickening effect to surfactant solutions. Figure 3 shows the viscosity of surfactant solutions with 15 % active at pH 6. The surfactant mixture is SLES with TEGO® Betain F 50. Above a ratio of 30 % TEGO® Betain F 50 no additional thickening agent is required.

Figure 3:



TEGO® Betain F 50 provides good lather properties. The foam gets creamy and longer lasting.

Packaging

880 kg pallet (4 x 220 kg drum)
1 000 kg container
Bulk

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 accidents and fires
- toxicity and ecological effects

is given in our material safety data sheets.

Guide Line Formulations

"Shower & Cream" FM 11068	
Phase A	
Water	35.0 %
Hydroxypropyl Guar Hydroxypropyltrium Chloride (Jaguar C-162)	0.3 %
Phase B	
Sodium Laureth Sulfate (28 %)	33.0 %
Glycerin	3.0 %
TEGO® Betain F 50 Cocamidopropyl Betaine	10.0 %
TEGOSOFT® GMC 6 (PEG-6 Caprylic/Capric Glycerides)	1.0 %
VARISOFT® PATC (Palmitamidopropyltrimonium Chloride)	1.5 %
ANTIL® HS 60 (Cocamidopropyl Betaine; Glyceryl Laurate)	3.0 %
TEGO® Pearl N 300 (Glycol Distearate; Laureth-4; Cocamidopropyl Betaine)	3.0 %
Phase C	
Water	10.0 %
Styrene/Acrylates Copolymer (Acusol OP 301)	0.2 %
Preparation: Disperse Jaguar C-162 in water for 10 minutes. Neutralize with Citric Acid 20 %. Then blend the ingredients of B in the given order to A while stirring. Finally add preservatives as required.	

Conditioning Shampoo, PEG-free FM 11129/	
REWOTERIC® AM C (Sodium Cocoamphoacetate)	15.0 %
REWOPOL® SB F 12 P (Disodium Lauryl Sulfosuccinate)	3.2 %
Water	64.2 %
TEGO® Betain F 50 (Cocamidopropyl Betaine)	7.0 %
ANTIL® HS 60 (Cocamidopropyl Betaine; Glyceryl Laurate)	7.6 %
TEGOSOFT® LSE 65 K Soft (Sucrose Cocoate)	2.5 %
ABIL® Quat 3272 (Quaternium-80)	0.5 %
Preparation: Mix the ingredients in the given order at ~30 °C. Adjust the pH value with Citric Acid to 6.1. Finally add preservatives as required..	

Shampoo/Showergel without preservatives C 007/29	
Sorbitol (70 %)	30.0 %
Sodium Olefin (C ₁₄₋₁₆) Sulfonate (37 %, pH approx. 13)	21.6 %
TEGOSOFT® GC (PEG-7 Glyceryl Cocoate)	2.5 %
Water	31.2 %
TEGO® Betain F 50 (Cocamidopropyl Betaine)	10.7 %
ANTIL® 171 (PEG-18 Glyceryl Oleate/Cocoate)	3.0 %
NaCl	1.0 %
Citric Acid (10 %)	ad pH 4.5
Preparation: Mix the ingredients in the given order. <i>Microbiological Challenge Test: passed.</i>	

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(Status: April, 2008)