TEGO® Betain C 60

Highly Concentrated Cocamidopropyl Betaine

- High active concentration
- Preservative-free
- Nearly colorless
- Low odor
- Low Viscosity – Easy to Process
- Mild
- With Skin Moisturizer
- Easy to Thicken
- Good foaming properties

Personal Care

INCI Name (CTFA name)

Cocamidopropyl Betaine

Chemical and physical properties (not part of specifications)	
Form	clear, low-viscous liquid
Color	Light
Active matter	~ 47 %

Properties

TEGO® Betain C 60 is higher in concentration than more commonly used Cocamidopropyl Betaine (CAPB) which is 30 % active matter.

The high active level of approximately 47 % is achieved through a patented technology that leads to lower color and odor values.

While standard CAPB is a gel at solids levels above 37 %, TEGO® Betain C 60 remains liquid and easy to handle at more than 56 % solids.

Due to the new process it is possible to improve the purity and concentration of CAPB significantly. TEGO® Betain C 60 is characterized by low color for use in light personal cleansing products. Very low odor is perceived, especially in formulations with pH>7. Residual levels of amidoamine and chloroacetic acid are also very low.

Good microbiological stability is achieved due to the high solids content. Because of this stability, TEGO® Betain C 60 is delivered in "bulk" without the inclusion of preservatives. The absence of a specific preservative allows for greater flexibility during formula development and throughout the production of finished products.

To a large extent, all technical properties relevant to the application characteristics are identical with the common cocamidopropyl betaines.

The elevated active concentration provides lower storage and transport expenses. The required tank volume for an equivalent amount of active matter is reduced by approximately 35%.

The active matter of TEGO® Betain C 60 includes Methanoylamidopropyl Dimethyl Glycine, a component which provides the additional benefit of skin moisturization. This effect is observed using in-vivo corneometer measurements. The short term efficacy is comparable to glycerol. The moisturization effect is observed from both skin caring and cleansing applications.

Application

TEGO® Betain C 60 is a very mild amphoteric surfactant for use in skin and hair cleansing products such as shampoos, shower and foam baths and also liquid soaps.

Fig. 1 shows the mitigating effect of TEGO® Betain C 60 on SLES. These data are recorded by in-vitro RBC Test (*Pape* et al., Drug Res. **40**, 498 (1990)).

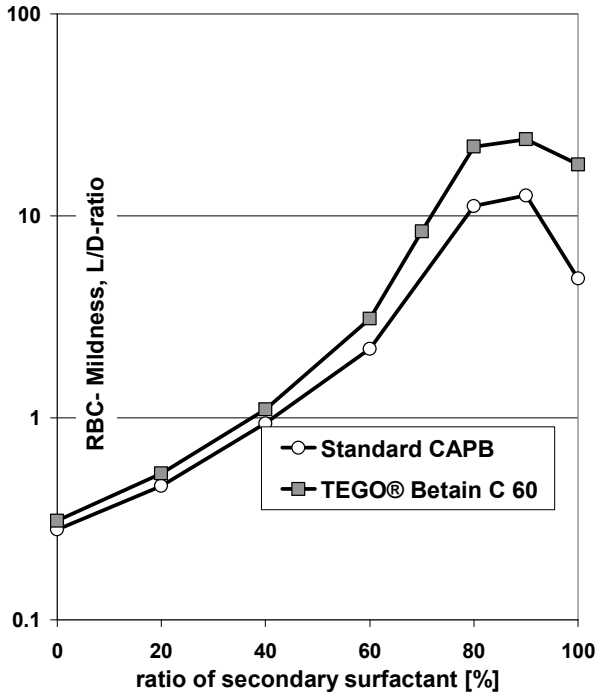

Figure 1: Mildness enhancing effect of TEGO® Betain C 60

As the ratio of TEGO® Betain C 60 increases in the surfactant mixture, mildness also increases. Best mildness is obtained when the ratio of TEGO® Betain C 60 is between 80 to 90 % in surfactant actives.

Standard Cocamidopropyl Betaines (CAPB) also show this synergistic behaviour, but to a lesser extent. Like standard CAPB, TEGO® Betain C 60 provides robust thickening properties to surfactant solutions.

TEGO® Betain C 60 provides good lather properties. The foam forms rapidly during application. Flash foam is enhanced relative to standard CAPB-types. The foam generated is creamy, dense and stable.

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 sheet.

Guide Line Formulations

"Shower & Cream" SG 1090/24	
Phase A	
Water	47.91 %
Citric Acid (20 %)	0.04 %
Guar Hydroxypropyltrimonium Chloride	0.20 %
Sodium Laureth Sulfate (28 %)	33.00 %
Glycerin	3.00 %
Perfume	0.25 %
TEGO® Betain C 60 Cocamidopropyl Betaine	6.30 %
TEGOSOFT® APM PPG-3 Myristyl Ether	0.50 %
ANTIL® HS 60 Cocamidopropyl Betaine; Glyceryl Laurate	2.60 %
TEGO® Pearl N 300 Glycol Distearate; Laureth-4; Cocamidopropyl Betaine	3.00 %
Phase B	
Water	3.00 %
Styrene/Acrylates Copolymer (Acusol OP 301, Rohm and Haas)	0.20 %
Preparation: Blend ingredients in the given order. The citric acid helps to dissolve the AMILAN Guar 39. Before adding the Acusol OP 301, blend it in a small amount of water separately.	

Mild shower gel for sensitive skin SG 1093/6	
Sodium Laureth Sulfate (28 %)	15.00 %
TEGOSOFT® GC PEG-7 Glyceryl Cocoate	1.00 %
TEGOSOFT® LSE 65 K Soft Sucrose Cocoate	1.50 %
REWOPOL® SB CS 50 B Disodium PEG-5 Laurylcitrate Sulfosuccinate; Sodium Laureth Sulfate	7.50 %
Water	62.00 %
TEGO® Betain C 60 Cocamidopropyl Betaine	7.30 %
TEGO® Betain 810 Capryl/Capramidopropyl Betaine	4.00 %
ANTIL® 200 PEG-200 Hydrogenated Glyceryl Palmate; PEG-7 Glyceryl Cocoate	1.70 %
Preparation: Mix the ingredients in the given order. Adjust the pH value with Citric Acid to 5.5. Finally add preservatives as required.	

Conditioning shampoo for coarse damaged hair SG 1095/5	
Sodium Laureth Sulfate (28 %)	32.00 %
VARISOFT® PATC Palmitamidopropyltrimonium Chloride	1.50 %
ANTIL® 200 PEG-200 Hydrogenated Glyceryl Palmate; PEG-7 Glyceryl Cocoate	2.20 %
ABIL® Quat 3272 Quaternium-80	2.00 %
Perfume	0.25 %
Water	55.25 %
Polyquaternium-10 Polymer JR 400, Amerchol	0.30 %
TEGO® Betain C 60 Cocamidopropyl Betaine	6.50 %
Preservative	q.s.

Preparation:

Dissolve the Polyquaternium-10 in the water and let it swell. Solve the listed ingredients carefully in the Sodium Laureth Sulfate. Then add the water/PQ-10 and then the Betain.

Mild Hair and Body Shampoo SG 1092/1	
TAGAT® CH 40 PEG-40 Hydrogenated Castor Oil	1.00 %
TEGOSOFT® GC PEG-7 Glyceryl Cocoate	0.50 %
Sodium Laureth Sulfate (28 %)	14.00 %
Water	50.50 %
REWOPOL® SB CS 50 B Disodium PEG-5 Laurylcitrate Sulfosuccinate; Sodium Laureth Sulfate	13.00 %
TEGO® Betain C 60 Cocamidopropyl Betaine	18.80 %
ANTIL® 171 PEG-18 Glyceryl Oleate/Cocoate	1.50 %
NaCl	0.70 %
Preservative	q.s.

Preparation:

Mix the ingredients in the given order and stir. Adjust the pH value to ~ 5.8 with Citric Acid. Finally add preservatives as required.

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