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Technical Information

# TEGO® Betain F KB 5 / TEGO® Betain F KM 1

## Mild amphoteric surfactants

### Intended use

Surfactant

### Benefits at a glance

- Mild
- Low viscosity – easy to process
- Good foaming properties
- Approved preservative systems

### INCI (PCPC name)

Cocamidopropyl Betaine

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

| | |
|---|---|
| Form | clear, low-viscosity; liquid |
| Color | light |
| Active matter | approx. 30% |
| Preservative | Sodium Benzoate |

### Properties

- TEGO® Betain F KB 5 and TEGO® Betain F KM 1 are biodegradable amphoteric surfactants, compatible with anionic, cationic and nonionic substances.
- Low viscositiy aqueous solution (pumpable).
- Good foam properties, good foam quality (finely porous and stable).
- Skin and mucous membrane compatibility of common anionic surfactants that strongly reduce the quantity of cutaneous fat and are relatively aggressive towards skin and mucosa, are improved by addition of TEGO® Betain F. In hair and skin cleansing preparations TEGO® Betain F can give a conditioning effect because of its substantivity.
- TEGO® Betain F KB 5 contains 0.5% Sodium Benzoate and TEGO® Betain F KM 1 is preserved with 0.1% Methylisothiazolinone.

### Application

Both TEGO® Betain F types are very mild and used in all kinds of hair and skin cleansing products:

- shampoos
- shower and bath preparations
- liquid soaps
- intimate hygiene solutions.

They are generally used in combination with anionic surfactants in a weight/weight ratio of 1 : 3 to 1 : 4. (TEGO® Betain F to anionic; related to active matter).

### Packaging

880 kg pallet (4 x 220 kg drum)
1000-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 case of accidents and fires
- toxicity and ecological effects

is given in our material safety data sheets.

## Guideline formulations

| **Foam Bath** | |
|---|---|
| **Phase A** | |
| ANTIL® 141 liquid | 3.0% |
| Perfume | q.s |
| Magnesium Lauryl Sulfate (30%) | 48.0% |
| **Phase B** | |
| Water | ad 100% |
| TEGO® Betain F KB 5 | 20.0% |
| Preservative | q.s. |
| Colour | q.s. |
| **Preparation:** | |
| Mix A and B in the given order; stir B into A. | |

| **Intimate hygiene solution** | |
|---|---|
| Neo PCL water soluble | 2.0% |
| Perfume | 0.2% |
| Sodium Laureth Sulfate (28%) | 21.4% |
| Water | ad 100% |
| Chlorhexidine Digluconate | 0.025% |
| Chamomille destillate | 0.5% |
| TEGO® Betain F KM 1 | 10.0% |
| TEGO® Pearl S 33 KS 5 | 1.5% |
| NaCl | 0.5% |
| ANTIL® 171 | 2.5% |
| Preservative | q.s. |
| **Preparation:** | |
| Mix A and B in the given order; stir B into A. | |

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# Product specification

**Material** TEGO BETAIN F KB 5
**Spec.Code** K01 TEGO BETAIN F KB 5

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45128 Essen
Phone: +49 (201) 173-2524
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| Inspection Characteristics | Method | Limits | Units | Z |
|---|---|---|---|---|
| Water Content | GM_0080_01 | 60.00-65.00 | % | X |
| Sodium Chloride | GM_0160_01 | <=6.00 | % | X |
| Monochloroacetic acid | GM_0530_03 | <=5.0 | ppm | X |
| pH-Value as is | GM_0130_01 | 4.0-5.5 | | X |
| Active Matter | GM_0060_02 | >=31.50 | % | X |
| Colour to Hazen | GM_0140_01 | <=150 | | X |
| Appearance 20°C | GM_0170_00 | OK | | X |
| Dichloroacetic Acid | GM_0530_03 | <=15.0 | ppm | X |
| Amidoamine/Amid Ammonium Salts | GM_0510_03 | <=0.35 | % | X |

| | |
|---|---|
| Appearance 20°C | light yellow, clear liquid |

Report on inspection certificate: X = specific/actual value, C = unspecific value/conformity, T = not reported

Typical Properties :

MW: free amine 294

MW: active 350

Sodium benzoate content: 0.45 - 0.55 %

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All warranty claims in respect of the conformity of our product are subject to our General Terms and Conditions of Sale and Delivery. The data listed above reflects the criteria for our internal quality tests. We do not hereby make any express or implied warranty, whether for specific properties or for fitness for any particular application or purpose. All values are valid for the product when despatched from the works.

The Standard Test Methods can be obtained from specialized publishers. Evonik's test methods are available on request.

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EVONIK INDUSTRIES

Edition 12
01 July 2015
Mat. Number G201055

# TEGO® Betain F KB 5

## Product data record

## 1. General information

### 1.1 Manufacturer/Supplier

Evonik Nutrition & Care GmbH
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Goldschmidtstrasse 100
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Phone: +49 (201) 173-2524
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personal-care@evonik.com
http://www.evonik.com/personal-care

### 1.2 Product Description

1.2.1 Raw material category Surfactant

1.2.2 Ingredients according to INCI

Cocamidopropyl Betaine

1.2.3 Composition

| Components | Source | Ratio |
|---|---|---|
| Cocamidopropyl Betaine | vegetable / synthetic | approx. 30 % |
| Sodium Chloride | | approx. 5.5 % |
| Glycerol | vegetable | approx. 2 % |
| Water | | approx. 62 % |

This composition information serves for information of our customers only.
It is neither relevant for the composition listing according to Regulation (EC) No 1223/2009, nor does it reflect the chemical composition according to the different chemical regulations in the world which is disclosed in the table "information on ingredients/hazardous components" in the relevant parts of the respective (Material) Safety Data Sheets.

1.2.4 Solvents, preservatives and other additives

| | CAS No. | EINECS / EC No. | content | Function |
|---|---|---|---|---|
| Sodium benzoate | 532-32-1 | 208-534-8 | 0.5 % | preservative |
| Water | 7732-18-5 | 231-791-2 | approx. 62 % | solvent |

No components which are listed in Annex II of the Regulation (EC) No 1223/2009 and its modifications and updates are added to and are not to be expected in the above mentioned product due to the raw materials used and the production process.

## 2. Information on production process

General description of production process:
Conversion of fats/fatty acids and diamine into amidoamine, followed by reaction with chloroacetic acid to produce betaine

The product is not irradiated.

TEGO® Betain F KB 5 is produced in the strictest absence of any animal derived material of any type.

Origin of vegetable starting material: coconut oil

GMO-Status:
The item does not contain ingredients that might have been derived from GM sources. However max 0.9 % cross-contamination is possible. Any protein or DNA is not present. Consequently the product will be PCR negative when tested.

### 2.1 By products

| | | method |
|---|---|---|
| Residual solvents | not applicable | |
| Amidoamine/Amid Ammonium Salts | max. 0.35 % | Chromatography |
| Nitrosamines (Volatile) | not detectable | Chemiluminescense |
| Monochloroacetic acid | max. 5 ppm | Chromatography |
| Dichloroacetic acid | max. 15 ppm | Chromatography |
| 1,4-Dioxane | not applicable | |
| Dimethylaminopropylamine | max. 10 ppm | HPLC |
| Pesticides | meets the valid regulatory requirements for limits on agricultural pesticides | |
| Total heavy metals | max. 20 ppm | AAS-ICP |
| As, Cd, Co, Cr, Hg, Ni, Pb, Sb | Each < 1 ppm | AAS-ICP |
| Latex | not to be expected in the product due to the raw materials used and the production process | |
| VOC | < 3 % according to SR (Swiss Right) 814.018 | |

### 2.2 CMR (Carcinogenic, Mutagenic or Reprotoxic)

The use in cosmetic products of substances classified as CMR substances, of category 1A or 1B or 2 under Part 3 of Annex VI to Regulation (EC) No 1272/2008 shall be prohibited.

Further Information:
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:342:0059:0209:en:PDF

Some of the CMR substances mentioned below and listed in Annex VI to Regulation (EC) No 1272/2008 are used as starting materials or solvents for the production of our cosmetic raw materials and may require reporting under California Proposition 65 or the Safe Cosmetics Act, SB 484.

The presence of these prohibited substances has to be seen as non-intended. It is stemming from impurities of the starting materials or the manufacturing process which is technically unavoidable in good manufacturing practice.

| CMR substance | Starting material | max. concentration | method |
|---|---|---|---|
| Ethylene Oxide | no | | |
| Propylene Oxide | no | | |
| Octamethylcyclotetrasiloxane (D4) | no | | |
| 2-Ethylhexanoic Acid | no | | |
| n-Hexane | no | | |
| Methyl Chloride | no | | |
| Dimethyl Sulphate | no | | |

### 2.3 "Allergens" according to the Regulation (EC) No 1223/2009

The presence of substances, the mentioning of which is required under the column 'Other' in Annex III, shall be indicated in the list of ingredients in addition to the terms parfum or aroma.

The cosmetic raw materials and the cosmetic actives supplied by Evonik Personal Care are manufactured without the use of perfumes and fragrances. An analytical proof for the absence in traces of the substances to be mentioned in addition to the terms parfum or aroma is not performed in cosmetic raw materials, which are chemically produced.

None of these substances have been intentionally added to our cosmetic raw materials or are formed during the manufacturing process according to our knowledge of the chemistry.

### 2.4 Food Ingredients listed in Annex IIIa of Commission Directive 2007/68/EC.

None of these substances have been intentionally added to our cosmetic raw materials or are formed during the manufacturing process according to our knowledge of the chemistry.

## 3. Microbiological status

| | |
|---|---|
| Total Viable Count | max. 100 cfu/g |
| Pathogens* | absent/g |

*Pathogens are: Enterobacteria, Pseudomonas, Enterococci, Candida albicans, Staphylococci

## 4. Shelf life / storage conditions

24 months after production (unopened original packaging)

## 5. Regulatory Status

### 5.1 Customs tariff number 34021900

### 5.2 Regulatory status (chemical regulations)

Europe

| Components | REACH status | CAS No. | EINECS / EC No. |
|---|---|---|---|
| Cocamidopropyl Betaine | Reg. No. 01-2119488533-30 | not assigned | 931-296-8 |

Other countries

| Country | | yes / no | Remark |
|---|---|---|---|
| Australia | AICS: | yes | CAS No. 61789-40-0 |
| China | IECSC: | yes | CAS No. 97862-59-4 |
| Canada | rev. ICL:<br><br><br>DSL:<br>NDSL: | yes<br><br><br>yes | CAS No. 97862-59-4 is on the revised in-commerce list (for import of the raw material to Canada)<br>CAS No. 61789-40-0 is on the DSL (still possible for export of Cosmetic formulations to Canada) |
| Taiwan | TCSI: | yes | CAS No. 97862-59-4 |

In the following countries the relevant authorities currently do not require pre-market approval for cosmetic raw materials:

Brazil, Japan, South Korea, Philippines, USA

### 5.2.1 Regulatory status (cosmetic regulation)

| Country | | yes / no | Remark |
|---|---|---|---|
| China | CFDA: | yes | |
| Japan | JSQI: | yes | JSQI No. 522079, but specifications not controlled |

## 6. Toxicology and Ecotoxicology

Refer to summary of ecotoxicological and toxicological data