



## Surfactants

Product Information

# dermofeel® GSC

Product features:

- ◆ Powerful anionic surfactant
- ◆ PEG-free
- ◆ from 100% plant materials
- ◆ Skin friendly
- ◆ ECOCERT registered

## dermofeel® GSC

**dermofeel® surfactants are 100% naturally derived and PEG-free.**

**dermofeel® GSC is a potent anionic emulsifier that effectively stabilises the oil-water-interface**

**An easy and versatile application is achieved with dermofeel® GSC**

### The product line

**dermofeel®** products comprise a carefully chosen line of emulsifiers, functional oils and antioxidants for cosmetic and dermatological applications. The well balanced product profiles are tailored to meet as many requirements of modern cosmetic concepts as possible. Functionality and technical performance are the main focus for the development of the **dermofeel®** product line. Wherever possible we choose raw materials from sustainable sources in order to comply with this important trend for an increasing number of consumer products.

### dermofeel® GSC

The product is formed by stearic acid and citric acid which are linked by a glycerol unit. The origin of all components lies in renewable plant sources. The manufacturing process uses environmentally friendly condensation reactions and does not involve any kind of alkoxyated species. Therefore **dermofeel® GSC** is PEG and PPG free. Its anionic nature gives the molecule many interesting cosmetic properties. It perfectly combines with other emulsifiers to stabilise O/W-emulsions. The citric acid moiety has a high affinity to the skin's amino acid structures and adheres to the skin to leave a smooth, silky skin feel. It is also often used as a co-emulsifier and to improve the rheology and sensorial profile of the formulation.

### Application

**dermofeel® GSC** can be employed in various cosmetic products. The excellent skin and eye compatibility grants applicability in virtually all O/W-emulsion type cosmetic products.

As a fine powder **dermofeel® GSC** is easily added to the oil phase and warmed to mix it with the other components of the formulation.

### dermofeel® GSC

- is a emulsifier from 100% naturally occurring materials
- is skin and eye friendly
- is PEG and PPG free

Characteristics of <b>dermofeel® GSC</b>	
Appearance	White free flowing powder
INCI	Glyceryl Stearate Citrate
Recommended dosage	0,5 – 4 %
Melting point	58-62 ° C
Natural Cosmetics Approval	ECOCERT, BDIH, NaTrue, Cosmos

## **dermofeel® GSC**

### **Cosmetic functions**

#### **Co emulsifier:**

The high HLB-value and its anionic nature make **dermofeel® GSC** an ideal co-emulsifier. It fills gaps between other emulsifier molecules of various structures within the oil-water-interface. It is particularly suitable for the emulsification with oil components of different polarity. When using oils with higher polarity, a higher amount of **dermofeel® GSC** should be employed. It counteracts coalescence by organizing ions and water molecules. The electrostatic forces form a shell around the droplets and will effectively stabilise the emulsion. This can also be used to stabilise the emulsion against the deteriorating effect of certain surfactants (like short chained additives) which otherwise may destabilise emulsions.

#### **Co detergent**

Because of its high HLB-value at the physiological pH of the skin **dermofeel® GSC** has also a mild cleaning effect. Since the citrate unit has a good affinity to the skin surface the lipophilic part will retain small amounts of oil on the skin, thus acting as a refatting agent.

#### **Rheology improvement:**

In some cases, particularly when surfactants cannot be thickened by addition of sodium chloride, **dermofeel® GSC** can improve viscosity in emulsions and shower products. This effect depends on the level of dissociation of the citrate unit and will be optimum at a slightly acidic pH as it is found in most cosmetic formulations. So, at a pH of 5.5 an addition of 2% of **dermofeel® GSC** may well improve the product's texture.

When PEG/PPG-free raw materials with a high performance are needed, then Dermofeel® SL is the right choice. The material is found in many products in the market and since its introduction to our portfolio the applications have been constantly broadened by our application lab. Please find some examples in the following section.

**Different cosmetic functions are obtained with **dermofeel® GSC****

## dermofeel® GSC

### Skin Care Cream

P11-GSC-8

Claims: Preservative free  
PEG-free

Phase	Ingredient	INCI	Supplier	%
A	Deionised Water	Aqua		67.50
	<b>dermofeel® PA-3</b>	Sodium Phytate, Aqua	<b>Dr. Straetmans</b>	<b>0.10</b>
	Glycerol	Glycerin		3.00
	<b>dermosoft® 1388</b>	Glycerin, Aqua, Parfum	<b>Dr. Straetmans</b>	<b>3.00</b>
	<b>dermosoft® GMCY</b>	Glyceryl Caprylate	<b>Dr. Straetmans</b>	<b>0.30</b>
A1	Keltrol T	Xanthan Gum	CP Kelco	0.50
	Laracare A 200	Galactoarabinan	Larex	0.20
B	<b>dermofeel® GSC</b>	Glyceryl Stearate Citrate	<b>Dr. Straetmans</b>	<b>3.50</b>
	<b>dermofeel® SL</b>	Sodium Stearoyl Lactylate	<b>Dr. Straetmans</b>	<b>1.50</b>
	Miglyol 812	Caprylic/Capric Triglyceride	Sasol	3.00
	<b>dermofeel® Toco 70</b>	Tocopherol, Helianthus Annuus (Sunflower) Seed Oil	<b>Dr. Straetmans</b>	<b>0.10</b>
	PCL Liquid 100	Cetearyl Ethylhexanoate	Symrise	3.00
	<b>dermofeel® BGC</b>	Butylene Glycol Dicaprylate/Dicaprate	<b>Dr. Straetmans</b>	<b>3.00</b>
	Lanette 16	Cetyl Alcohol	Cognis	4.00
	Cutina GMS	Glyceryl Stearate	Cognis	3.00
	DC 556	Phenyl Trimethicone	Dow Corning	0.10
	Sunflower Seed Oil	Helianthus Annuus		4.00
C	Parf. Waterlily 446652 (SCCNFP-sensitizer free up to 10% use-level)	Parfum	Symrise	0.20
				<b>100.00</b>

#### Manufacturing Procedure:

1. Heat phase A up to 78°C.
2. Disperse Keltrol and Laracare one after the other until completely dissolved.
3. Heat phase B to 78°C. Emulsify phase B to phase A under stirring.
4. Homogenize for 1-2 min. using an Ultra Turrax.  
Start to cool down to 32°C under stirring. Add perfume oil.

#### Specification Values:

Appearance: Viscous cream.

pH: 4.8 – 5.4.

Viscosity (Brookfield: Helipath TF; Speed 10): Approx. 80.000 mPa.s.

Centrifugation (4.000 rpm, 15 min.): No separation.

**Microbiological Stability:** Proven.

#### Disclaimer:

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## dermofeel® GSC

### Sublim Mango Cream ECO

6.135.01

Claims: Velvety rich skin feel



Phase	Ingredient	INCI	Supplier	%
A	Orange Blossom Water	Citrus Aurantium Amara Flower Distillate	Sanoflore	15.00
	Deionised Water	Aqua		44.25
	<b>dermofeel® PA-3</b>	Sodium Phytate, Aqua	<b>Dr. Straetmans</b>	<b>0.05</b>
	Glycerol	Glycerin		3.00
	<b>dermosoft® 700 B</b>	Parfum	<b>Dr. Straetmans</b>	<b>0.75</b>
	<b>dermosoft® 750</b>	Parfum	<b>Dr. Straetmans</b>	<b>0.15</b>
A1	Satiaxane CX 91	Xanthan Gum	Evonik Goldschmidt	0.30
A2	<b>Biophilic H</b>	Hydrogenated Lecithin, C12-16 Alcohols, Palmitic Acid	<b>Lucas Meyer*</b>	<b>4.00</b>
B	Cocoa Butter	Theobroma Cacao (Cocoa) Seed Butter	Gustav Heess	15.00
	<b>dermofeel® GSC</b>	Glyceryl Stearate Citrate	<b>Dr. Straetmans</b>	<b>1.00</b>
	<b>dermofeel® Toco 70 non-GMO</b>	Tocopherol, Helianthus Annuus (Sunflower) Seed Oil	<b>Dr. Straetmans</b>	<b>0.50</b>
	Annato Oil	Bixa Orellana Seed Oil	Rain Forest	2.00
	Safflower Oil	Carthamus Tinctorius (Safflower) Seed Oil	Henry Lamotte	4.00
	Lanette 22	Behenyl Alcohol	Cognis	4.00
C	<b>Suprem Mangué Nature</b>	See TDS	<b>Lucas Meyer*</b>	<b>2.00</b>
	<b>Hydraporine Nature</b>	Betaine, Aqua, Glycerin, Hydrogenated Lecithin, Honey, Pectin	<b>Lucas Meyer*</b>	<b>4.00</b>
				<b>100.00</b>

#### Manufacturing Procedure:

1. Heat separately A and B up to 75 – 80°C under slow mixing. Disperse Satiaxane CX 91.
2. Add **Biophilic**. Keep A at 75 – 80°C under slow mixing during approx. 20 min (hydration step!)
3. Add phase B to phase A under slow mixing. Mix slowly during 5 min (emulsification step!)
4. Homogenize for 2 min. using an Ultra-Turrax.
5. Cool down under medium stirring. Add components of phase C below 40°C.
6. Adjust pH if necessary.



#### Specification Values:

Appearance: Thick, bright yellow cream.

pH: 5.0 – 5.5.

Viscosity (Brookfield: LV 6; Speed 10): > 60.000 mPa.s.

Centrifugation (4.000 rpm, 20 min.): No separation.

\* distributed in Germany by Dr. Straetmans GmbH

**Stability:** Stable for more than 3 months at 40°C, 20°C and 4°C.

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## dermofeel® GSC

### Pre Tan Body Lotion Eco

L008-62-1107

Claims: Preservative free  
Light skin feel  
With natural tan activator



Phase	Ingredient	INCI	Supplier	%
A	Deionised Water	Aqua		53.55
	Rose Flower Water	Rosa Centifolia Flower Water	Sanoflore	15.00
	Glycerol	Glycerin		5.00
	<b>dermosoft® GMCY</b>	Glyceryl Caprylate	Dr. Straetmans	0.30
	<b>dermosoft® 700 B</b>	Parfum	Dr. Straetmans	0.70
	<b>dermosoft® 688 ECO</b>	Parfum	Dr. Straetmans	0.20
A1	Keltrol RD	Xanthan Gum	Kelco	0.25
B	<b>dermofeel® GSC</b>	Glyceryl Stearate Citrate	Dr. Straetmans	2.50
	Cocoa Butter	Theobroma Cacao (Cocoa) Seed Butter	Gustav Heess	3.00
	<b>dermofeel® TC-7</b>	Triheptanoin	Dr. Straetmans	6.00
	Phytosqualan	Squalane	NRC / Sophim	3.00
	Lanette O	Cetearyl Alcohol	Cognis	1.50
	<b>dermofeel® E 74 A</b>	Tocopheryl Acetate, Helianthus Annuus (Sunflower) Seed Oil	Dr. Straetmans	1.00
	<b>dermofeel® Toco 70 non-GMO</b>	Tocopherol, Helianthus Annuus (Sunflower) Seed Oil	Dr. Straetmans	0.20
C	<b>Suprem Active Cocoa</b>	See TDS	Lucas Meyer*	2.00
D	Deionised Water	Aqua		5.00
	<b>Melactiva</b>	Mucuna Pruriens Seed Extract, Maltodextrin	Lucas Meyer*	0.50
	Ascorbic Acid	Ascorbic Acid		0.10
E	Frag. Vanille 3043/35	Parfum	Vanessence	0.30
				<b>100.00</b>

#### Manufacturing Procedure:

- Heat phase A up to 78 °C until **dermosoft® 688 ECO** is completely dissolved. Disperse Keltrol.
- Heat phase B up to 78 °C.
- Emulsify phase B into phase A under stirring. Homogenize for 1-2 min. using an Ultra Turrax.
- Start to cool down under medium stirring.
- Add C, pre-solution of phase D and E below 40 °C and cool down to 30 °C under stirring. Adjust pH value if necessary.

#### Specification Values:

Appearance: Soft light brown emulsion.

pH: 5.2 – 5.4.

Viscosity (Brookfield: Helipath TF; Speed 10): 10.000 - 20.000 mPas.

Centrifugation (15 min., 4.000 rpm): No separation.

**Stability:** More than 3 months stable at 20 °C, 40 °C and 4 °C.

**Microbiological Stability:** Proven.

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\* distributed  
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Dr. Straetmans GmbH

## **dermofeel® GSC**

**Dozens of formulation examples are compiled in our Formulary**

More formulations with our products are available for both, traditional and natural cosmetics concepts. Please contact us to receive your copy of our general Formulary and our Formulary NATURE Edition, respectively.

### **Toxicology**

**dermofeel® GSC** is not irritating, not sensitizing and does not contain genetically modified material, dioxine, phthalates, BSE-related material or CMR-material.

Glyceryl Stearate Citrate is a common ingredient in the food industry and has practically no toxic effects.

### **Packing units**

**dermofeel® GSC** is available in 20 kg bags.

### **Environmental Information**

**dermofeel® GSC** is produced in an environmentally and toxicologically unobjectionable process using 100 % plant derived ingredients. The biodegradability of **dermofeel® GSC** is very good. **dermofeel® GSC** has not been tested on animals.

### **Handling and storage**

Please store in the original container at room temperature in dry environment. In closed original containers **dermofeel® GSC** can be stored for at least 3 years. **dermofeel® GSC** does not need to be preserved.

For further information contact our Dr. Straetmans sales team:  
[sales@dr-straetmans.de](mailto:sales@dr-straetmans.de)

or your local representative.

## Europe

### Benelux

Jan van Laarhoven-Waalwijk b.v.  
E-Mail: [laarhoven@planet.nl](mailto:laarhoven@planet.nl)

### Bulgaria

Biesterfeld Pro Specialty Chemicals  
E-Mail: [pavel.makedonski@biesterfeldpro.com](mailto:pavel.makedonski@biesterfeldpro.com)  
[www.biesterfeldpro.com](http://www.biesterfeldpro.com)

### Croatia

Biesterfeld Spezialchemie d.o.o.  
E-Mail: [gordana.peric@biesterfeld.hr](mailto:gordana.peric@biesterfeld.hr)  
[www.biesterfeld.hr](http://www.biesterfeld.hr)

### Czech Republic

Biesterfeld Silcom s.r.o.  
E-Mail: [terezie.sestakova@bisi.cz](mailto:terezie.sestakova@bisi.cz)  
[www.bisi.cz](http://www.bisi.cz)

### Denmark/Iceland/Norway

Bionord A/S  
E-Mail: [info@bionord.dk](mailto:info@bionord.dk)  
[www.bionord.dk](http://www.bionord.dk)

### France

Lucas Meyer Cosmetics S.A.  
E-Mail: [info@lmc cosmetics.fr](mailto:info@lmc cosmetics.fr)  
[www.lmc cosmetics.fr](http://www.lmc cosmetics.fr)

### Great Britain

Gemro Products Ltd.  
E-Mail: [stephen.blech@gemroproducts.com](mailto:stephen.blech@gemroproducts.com)  
[www.gemroproducts.com](http://www.gemroproducts.com)

### Greece

Cellco Chemicals Ltd.  
E-Mail: [paraskevopoulos@cellco.gr](mailto:paraskevopoulos@cellco.gr)

### Hungary

Biesterfeld Special Chemicals Hungary Ltd.  
E-Mail: [l.verecke@biesterfeld.hu](mailto:l.verecke@biesterfeld.hu)  
[www.biesterfeld.hu](http://www.biesterfeld.hu)

### Italy

Pharma Cosm Polli srl  
E-Mail: [info@pharmacosm.it](mailto:info@pharmacosm.it)  
[www.pharmacosm.it](http://www.pharmacosm.it)

### Poland

Biesterfeld Polska Sp.z.o.o.  
E-Mail: [r.borzynska@biesterfeld.com.pl](mailto:r.borzynska@biesterfeld.com.pl)  
[www.chemia.biesterfeld.com.pl](http://www.chemia.biesterfeld.com.pl)

### Romania

Biesterfeld Spezialchemie Romania S.R.L.  
E-Mail: [cmicu@biesterfeld.ro](mailto:cmicu@biesterfeld.ro)  
[www.biesterfeld-spezialchemie.ro](http://www.biesterfeld-spezialchemie.ro)

### Spain

Comercial Quimica Jover, S.L.  
E-Mail: [comercial@cqjover.com](mailto:comercial@cqjover.com)  
[www.cqjover.com](http://www.cqjover.com)

### Sweden/Finland

Bionord AB  
E-Mail: [lana@bionord.se](mailto:lana@bionord.se)  
[www.bionord.se](http://www.bionord.se)

### Switzerland

Rahn AG  
E-Mail: [schulerg@rahn-group.com](mailto:schulerg@rahn-group.com)  
[www.rahn.ch](http://www.rahn.ch)

## Asia/Pacific

### China

Shanghai Hope Tec  
E-Mail: [jason@htchem.com.cn](mailto:jason@htchem.com.cn)

### Iran

Tooska-E-Khorasan Trading Co.  
E-Mail: [hrt@tooskaco.com](mailto:hrt@tooskaco.com)  
[www.tooskaco.com](http://www.tooskaco.com)

### Israel

Efal chemical industries Ltd.  
E-Mail: [roni@efal.com](mailto:roni@efal.com)  
[www.efal.com](http://www.efal.com)

### Korea

HANA Trading Company  
E-Mail: [Hoffnung@hitel.net](mailto:Hoffnung@hitel.net)

### Malaysia

Ingredients Plus Sdn Bhd  
E-Mail: [chaist@ingredientsplus.com.my](mailto:chaist@ingredientsplus.com.my)

### Phillippines

CTC Far East Phils. Inc.  
E-Mail: [faith@ctcfareastphils.com](mailto:faith@ctcfareastphils.com)  
[www.ctc-group.com](http://www.ctc-group.com)

### Thailand

Adinop Co. Ltd.  
E-Mail: [mail@adinop.co.th](mailto:mail@adinop.co.th)  
[www.adinop.co.th](http://www.adinop.co.th)

### Turkey

Kalekimya  
E-Mail: [birgen.kaleagasi@kalekimya.com](mailto:birgen.kaleagasi@kalekimya.com)

### Australia / New Zealand

RejuvaCare  
E-Mail: [smorse@rejuvacare.com.au](mailto:smorse@rejuvacare.com.au)  
[www.rejuvacare.com.au](http://www.rejuvacare.com.au)

## Americas

### Argentina

nordest nova s.a..  
E-Mail: [sergio.egrassi@nordest-nova.com](mailto:sergio.egrassi@nordest-nova.com)

### Chile

Maprin Representaciones Ltda.  
E-mail: [JCroxatto@maprin.cl](mailto:JCroxatto@maprin.cl)

### Colombia

Cromaroma Ltda.  
E-mail: [cromaroma@etb.net.co](mailto:cromaroma@etb.net.co)

### USA

Kinetik Technologies, Inc.  
E-Mail: [chj@kinetiktech.com](mailto:chj@kinetiktech.com)  
Web: [www.kinetiktech.com](http://www.kinetiktech.com)

## Africa

### South Africa

Meganede  
E-Mail: [megan.jones@meganede.com](mailto:megan.jones@meganede.com)  
[www.meganede.com](http://www.meganede.com)