



## *Functional Lipids for Cosmetics*



## Functional Lipids for Cosmetics

Berg + Schmidt has been operating in the oleochemicals sector for over 50 years, and the company has achieved an outstanding position in the international markets. Originally specialists in functional lipids for cosmetic applications, we now develop and supply a wide range of other functional ingredients such as emollients, viscosity agents, emulsion stabilizers and surfactants for innovative cosmetic products. Our current portfolio comprises an attractive spectrum of fatty alcohols, fatty acids, fatty-acid esters, lecithin and shea butter and is being enlarged continuously.

### Our core competencies:

- Emollients
- Viscosity modifiers
- Emulsion stabilizers
- Surfactants

### Our product range:

- Fatty alcohols
- Fatty acids
- Fatty-acid esters
- Lecithin
- Shea butter

### Product development in the service of our customers

Berg + Schmidt is a member of the independent, owner-managed Stern-Wywiol Gruppe. The group of companies is among the successful enterprises operating internationally in the world of food and functional lipids.

Research and applications development are important core competences of the Stern-Wywiol Gruppe. The extensive applications research of the individual companies is concentrated at the Technology Centre in Ahrensburg, near Hamburg, which was recently enlarged to an area of 3,000 m<sup>2</sup>. In 11 applications laboratories with advanced and innovative technical equipment, experts from the fields of vitamins and micronutrients, enzymes, lipid technology, spraying and fluid-bed processing, stabilizing and emulsification work together under one roof. And Berg + Schmidt's customers benefit by this close cooperation, too: by an interdisciplinary approach that creates wider horizons. With our highly motivated development team we regularly launch new, efficient products to which our sister companies have made their contribution.

**"Any achievement can be copied, with one exception:  
the fruits of our enthusiasm."**

(Volkmar Wywiol, founder of the Stern-Wywiol Gruppe)



Our technology centre in Ahrensburg near Hamburg

### ***We are proud of our capabilities***

In our daily business – from purchase of our raw materials through product development and manufacture to transportation – we attach great importance to quality, sustainability and communication with our employees, customers and suppliers in a spirit of partnership. Our products are manufactured by the latest technical methods, and their quality is constantly monitored under our own control system and by impartial outside laboratories.

We ensure permanent monitoring and continuous optimization of our product quality over the entire supply chain through affiliates of our own in Singapore, Malaysia and India. With its modern logistics centres, Berg + Schmidt offers a reliable and flexible delivery service.

We give our customers competent advice on developing or optimizing recipes and formulations. And our committed sales team will support you with personal contacts on the spot, at your plant – or in our own company, if you wish.



## Emollients and Skin Conditioners

In the language of cosmetics or dermo-cosmetics an emollient is a refatting agent, i.e. an ingredient of a cosmetic formulation that provides the skin with the fat it needs. It reduces evaporation and thus increases the moisture content of the skin.

Our emollients and skin conditioners help the skin to stay soft and supple. They also reduce irritation and drying out by improving the skin barrier.

Many of our products also enhance the spreadability of formulations or act as co-emulsifiers or solubilizers.

### Applications:

- Sun care
- Lip care
- Facial care
- Body care
- Hair care
- Decorative cosmetics



### Overview of emollients and skin conditioners

INCI	B+S Name	State at room temperature	Spreadability	Polarity	Emollient/ Skin conditioning	Antistatic	Binding	Hair conditioning	Masking	Perfuming	Solvent	Viscosity modifying
Caprylic/Capric Triglyceride	<b>BergaBest MCT Oil 60/40</b>	liquid	medium	strong	●				●	●	●	●
Caprylic/Capric Triglyceride	<b>BergaBest MCT Oil 70/30</b>	liquid	medium	strong	●				●	●	●	●
Propylene Glycol Dicaprylate/Dicaprate	<b>BergaBest PGDE</b>	liquid	medium	strong	●							●
Isopropyl Myristate	<b>BergaCare EM-14</b>	liquid	high	medium	●		●			●	●	
Isopropyl Palmitate	<b>BergaCare EM-16</b>	liquid	high	medium	●	●	●			●	●	
Ethylhexyl Palmitate	<b>BergaCare EM-OP</b>	liquid	medium to high	medium	●					●		
Ethylhexyl Stearate	<b>BergaCare EM-OS</b>	liquid	medium to high	medium	●							
Ethylhexyl Cocoate	<b>BergaCare EM-OC</b>	liquid	medium to high	medium	●							
Cetearyl Ethylhexanoate	<b>BergaCare EM-CSO</b>	liquid	high	medium	●			●				
Cetearyl Isononanoate	<b>BergaCare EM-SN</b>	liquid	medium	medium	●			●				
Isononyl Isononanoate	<b>BergaCare IN2</b>	liquid	high	medium	●	●						



### Overview of emollients and skin conditioners

INCI	B+S Name	State at room temperature	Spreadability	Polarity	Emollient / Skin conditioning	Emulsifying / Emulsion stabilizing	Masking	UV filter solubilizing	Viscosity modifying
Cetyl Palmitate	<b>BergaCare EM-CP</b>	solid	n.a.	medium	●		●	●	
Cetyl Octanoate	<b>BergaCare EM-CO</b>	liquid	medium	medium	●				
C12-C15 Alkyl Benzoate	<b>BergaCare EM-AB</b>	liquid	low	medium	●		●		
Ethylhexyl Ethylhexanoate	<b>BergaCare 88</b>	liquid	medium to high	medium	●				
Ethylhexyl Isononaoate	<b>BergaCare 89</b>	liquid	high	medium	●				
Butyrospermum Parkii Butter	<b>BergaCare SB</b>	solid	n.a.	strong	●			●	
Butyrospermum Parkii Butter	<b>BergaCare SB-R0</b>	liquid	low	strong	●				
Hydrogenated Shea Butter	<b>BergaCare SB 45</b>	solid	n.a.	strong	●			●	
Palmitic Acid		solid	n.a.	-	●	●		●	
Palmitic and Stearic Acid		solid	n.a.	-	●	●		●	
Oleic Acid		liquid	-	-	●	●			

## Viscosity modifiers

Even with extensive development work, the right active ingredients, an irresistible fragrance and clever placement in the market, a cosmetic product will only be received favourably by consumers if it has a pleasant consistency. The consumer's first impression of a cosmetic product is decisive, for consistency is related to perception of quality.

But the viscosity of a product has to meet technical requirements too. In the case of aerosols, for example, the viscosity must be as low as possible, and for body butters it must be high. Our products modify the consistency of the end product according to its purpose.

### Applications:

- Facial care
- Body care
- Massage oil
- Hair rinses, masks
- Aerosols and sprays



### Overview of viscosity modifiers

INCI	B+S Name	State at room temperature	Viscosity 20°C / titre	Description	Emollient / Skin conditioning	Emulsifying / Emulsion stabilizing	Masking	Perfuming	Solvent	Viscosity modifying
Caprylic/Capric Triglyceride	<b>BergaBest MCT Oil 60/40</b>	liquid	25 - 33 m Pa s	C8: 50 - 65%, C10: 30 - 45%	●		●	●	●	●
Caprylic/Capric Triglyceride	<b>BergaBest MCT Oil 70/30</b>	liquid	~ 27 m Pa s	C8: 65 - 75 %, C10: 25 - 35 %	●		●	●	●	●
Propylene Glycol Dicaprate/Dicaprylate	<b>BergaBest PGDE</b>	liquid	~ 7m Pa s	C8: 50 - 65 %, C10: 30 - 45 %	●					●
Butyrospermum Parkii Butter	<b>BergaCare SB</b>	solid	30 - 35°C	unsap. min. 5 % POZ max 5 meq/kg water cont. max. 0.2 %	●					●
Hydrogenated Shea Butter	<b>BergaCare SB 45</b>	solid	41 - 47°C	unsap. min 5 % POZ max 5 meq/kg water con. max. 0.2 %	●					●
Hydrogenated Castor Oil	<b>Sternoil HCO</b>	solid	85 - 88°C	acid value: max. 3 mg KOH/g, hydroxyl-value: min. 155 mg KOH/g, saponification value: min. 175 mg KOH/g	●	●				●



### Overview of viscosity modifiers

INCI	B+S Name	State at room temperature	Viscosity 20°C / titre	Description	Emollient / Skin conditioning	Emulsifying / Emulsion stabilizing	Binding	Foam boosting	Hair conditioning	Opacifying	Viscosity modifying
Behenyl Alcohol	<b>Vegarol 22</b>	solid	62 - 67°C	C18: 5 - 10 %, C20: 10 - 20 %, C22: 70 - 80 %	●	●	●		●		●
Behenyl Alcohol	<b>Vegarol 1822</b>	solid	55 - 60°C	C18: 41 - 45 %, C20: 9 - 13%, C22: 42 - 46 %	●	●	●		●		●
Stearyl Alcohol	<b>Vegarol 1898</b>	solid	56 - 59°C	C18 > 98 %	●	●		●		●	●
Cetearyl Alcohol	<b>Vegarol 1618 TA</b>	solid	50 - 54°C	C16: 25 - 35 %, C18: 65 - 70 %	●	●		●		●	●
Cetearyl Alcohol	<b>Vegarol 1618 50:50</b>	solid	48 - 52°C	C16: 45 - 55 %, C18: 45 - 55 %	●	●		●		●	●
Cetearyl Alcohol	<b>Vegarol 1618 PS</b>	solid	47 - 51°C	C16: 55 - 56 %, C18: 35 - 45 %	●	●		●		●	●
Cetyl Alcohol	<b>Vegarol 1698</b>	solid	47 - 50°C	C16 > 98 %	●	●		●		●	●

## Emulsifiers and emulsion stabilizers

In cosmetic products, emulsifiers are used as adjuvants for combining non-miscible fluids into an emulsion. The special molecular structure of the emulsifiers reduces the surface tension between the hydrophilic and lipophilic constituents, thus promoting the formation of finely dispersed mixtures.

The emulsion stabilizers improve and help to maintain the stability and shelf-life of dispersions.

You will find we have the right emulsifier for practically any cosmetic formulation.

### Applications:

- Hair care
- Facial care
- Body care
- Eye and lip care
- Sun care
- Decorative cosmetics

### Overview of emulsifiers and emulsion stabilizers

INCI	B+S Name	State at room temperature	Viscosity 20°C / titre	HLB/HLB required	Emollient / Skin conditioning	Emulsifying / Emulsion stabilizing	Binding	Foam boosting	Hair conditioning	Masking	Opacifying	Viscosity modifying
Glycol Stearate	<b>BergaCare Pearl</b>	solid	52 - 63°C	ca. 3	●	●					●	
Glycol Distearate	<b>BergaCare Pearl 2</b>	solid	60 - 65°C	ca. 1	●	●					●	●
Glyceryl Stearate	<b>BergaBest GS 40</b>	solid	57 - 63°C	ca. 4	●	●						
Glyceryl Stearate	<b>BergaBest GS SE</b>	solid	57 - 59°C	ca. 6	●	●						
PEG 7 Glyceryl Cocoate	<b>BergaCare EM-HE7</b>	liquid	~ 250 mPa s	ca.11		●						
Cetyl Alcohol	<b>Vegarol 1698</b>	solid	47 - 50°C	15 - 16	●	●		●		●	●	●
Cetearyl Alcohol	<b>Vegarol 1618 TA</b>	solid	50 - 54°C	15 - 16	●	●		●			●	●
Cetearyl Alcohol	<b>Vegarol 1618 PS</b>	solid	47 - 51°C	15 - 16	●	●		●			●	●
Cetearyl Alcohol	<b>Vegarol 1618 50:50</b>	solid	48 - 52°C	15 - 16	●	●		●			●	●
Stearyl Alcohol	<b>Vegarol 1898</b>	solid	56 - 59°C	15 - 16	●	●		●		●	●	●
Behenyl Alcohol	<b>Vegarol 1822</b>	solid	55 - 60°C	15 - 16	●	●	●		●			●
Behenyl Alcohol	<b>Vegarol 22</b>	solid	62 - 67°C	15 - 16	●	●	●		●			●
Lauric Acid		solid	42 - 44°C	ca. 16		●						
Myristic Acid		solid	52 - 54°C	15 - 16		●						
Palmitic Acid		solid	61 - 63°C	15 - 16	●	●						
Palmitic and Stearic Acid		solid	55 - 56,5°C	15 - 16	●	●						
Stearic Acid		solid	55 - 58°C	ca.15		●				●		
Oleic Acid		liquid	~ 39 mPa s	ca.17	●	●						





## Surfactants

Mild surfactants free the skin gently and efficiently from excess oil and other residues without disturbing its natural moisture balance.

Besides being fully compatible with the skin and hair, surfactants must give cleansers good foaming properties. Rapid lathering and high volume, good consistency and stability of the foam are especially important. Our surfactants meet all these requirements.

### Applications:

- Shampoos
- Shower gels and creams
- Soaps
- Shaving foams
- Baby care products

### Overview of surfactants

INCI	B+S Name	State at room temperature	Description	Type	Active matter	Foam boosting	Emollient / Skin conditioning	Emulsifying / Emulsion stabilizing	Hair conditioning	Solvent	Surfactant
PEG 7 Glyceryl Cocoate	<b>BergaCare EM-HE7</b>	liquid	transparent liquid	non-ionic	-	●		●			●
PEG 40 Hydrogenated Castor Oil	<b>BergaCare HE 40</b>	liquid	viscous liquid to soft paste	non-ionic	-		●			●	●
Sodium Cocoyl Isethionate	<b>BergaSoft SCI 80</b>	solid	white needles	anionic	≥ 80	●			●		●
Sodium Cocoyl Isethionate	<b>BergaSoft SCI 65</b>	solid	white needles/ flakes	anionic	≥ 65	●			●		●
Sodium Cocoyl Glycinate	<b>BergaSoft SCG 22</b>	liquid	transparent-cloudy liquid	anionic	≥ 22	●	●		●		●



## Opacifiers

Opacifiers are substances which are added to transparent or translucent cosmetic formulations to render them more impervious to visible light. Our opacifiers are simple to use and lend the products a pleasant, luxurious, creamy appearance with excellent quality and homogeneity.

### Applications:

- Facial care
- Body care
- Shampoo
- Hair rinses and treatments

### Overview of opacifiers

INCI	B+S Name	State at room temperature	Viscosity 20°C / titre	Description	Emollient / Skin conditioning	Emulsifying / Emulsion stabilizing	Foam boosting	Masking	Opacifying	Refatting	Viscosity modifying
Glycol Stearate	<b>BergaCare Pearl</b>	solid	52 - 63°C	C16: 52 - 58 %, C18: 40 - 45 %	●	●			●		
Glycol Distearate	<b>BergaCare Pearl 2</b>	solid	60 - 65°C	C16: 52 - 58 %, C18: 40 - 45 %	●	●			●		●
Cetyl Alcohol	<b>Vegarol 1698</b>	solid	47 - 50°C	C16 > 98 %	●	●	●	●	●		●
Cetearyl Alcohol	<b>Vegarol 1618 TA</b>	solid	50 - 54°C	C16: 25 - 35 %, C18: 65 - 70 %	●	●	●		●		●
Cetearyl Alcohol	<b>Vegarol 1618 PS</b>	solid	47 - 51°C	C16: 55 - 65 %, C18: 35 - 45 %	●	●	●		●		●
Cetearyl Alcohol	<b>Vegarol 1618 50:50</b>	solid	48 - 52°C	C16: 45 - 55 %, C18: 45 - 55 %	●	●	●		●		●
Stearyl Alcohol	<b>Vegarol 1898</b>	solid	56 - 59°C	C18 > 98 %	●	●	●	●	●	●	●



The Berg + Schmidt team

## ***What can we do for you? Draw on Berg + Schmidt's competence in cosmetics!***

We are committed partners of the cosmetics industry and would like to use our know-how to support you produce top quality at reasonable cost.

We will be pleased to support you develop new products. Why not approach us?



The Technology Centre in Ahrensburg

## Functional Lipids for Cosmetics

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