Multifunctional Additives

Product Information

dermosoft® 1388 eco

Product features:

- Multifunctional fragrance composition
- Moisturizing effect
- Skin friendly
- Anti-inflammatory properties
- Broad antimicrobial activity
- For natural cosmetics
Multifunctional Additives

dermosoft® 1388 eco

The product line dermosoft® products are carefully chosen multifunctional cosmetic ingredients. The well balanced product profiles are tailored to the needs of cosmetic formulations. Basic cosmetic functions like hydrating, conditioning, masking and others are combined with an excellent antimicrobial profile. dermosoft® products will meet many of your requirements for the improvement of cosmetic formulations and along the way protect the product against microorganisms. With the aid of dermosoft® cosmetic products can easily be formulated without traditional preservatives.

dermosoft® 1388 eco

The product’s active principle is a blend of compounds found in many plants in nature. In combination with plant derived glycerol contained in this skin friendly mixture a moisturizing effect can be created. The delicate scent of dermosoft® 1388 eco will help to mask undesired odours of raw materials but will usually not interfere with other fragrance. The gently acidic ingredients will improve the natural acidic environment of the skin. And finally, the outstanding antimicrobial activity of dermosoft® 1388 eco can convert most cosmetic formulations in self preserving products – with no further need for traditional preservatives. Interestingly also bees use one of the contained natural acids for the difficult task of protecting their nest provisions (pollen and nectar) against microbiological spoilage.

Application

In order to further improve the versatility of these products we also focussed on the convenience of our dermosoft® range. dermosoft® 1388 eco is liquid and clearly water soluble and can be employed easily in surfactant based rinse off concepts, emulsions (O/W an W/O) as well as in hydroalcoholic products. To avoid recrystallization and maximum efficacy please regard the recommended use level and the pH requirements.

dermosoft® 1388 eco provides:

● easy application
● compatibility with natural cosmetics
● broad spectrum microbiological activity

Characteristics of dermosoft® 1388 eco

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear, colourless to pale yellow liquid</td>
</tr>
<tr>
<td>INCI</td>
<td>Glycerin; Aqua; Sodium Levulinate; Sodium Anisate</td>
</tr>
<tr>
<td>Recommended dosage</td>
<td>3.0 – 4.0 %</td>
</tr>
<tr>
<td>Antimicrobial performance</td>
<td>•• very good, • fair, •• moderate, • not sufficient</td>
</tr>
<tr>
<td>Gram+</td>
<td>-</td>
</tr>
<tr>
<td>Gram-</td>
<td>-</td>
</tr>
<tr>
<td>Yeast</td>
<td>-</td>
</tr>
<tr>
<td>Mould</td>
<td>-</td>
</tr>
<tr>
<td>pH-range</td>
<td>4.5 - 5.5</td>
</tr>
<tr>
<td>Regulatory status</td>
<td>Registered in EU, US, Japan</td>
</tr>
</tbody>
</table>
Multifunctional Additives

dermosoft® 1388eco

Cosmetic functions

Hydrating
The hydrating effect of glycerine has been proved in many clinical studies and has long been used in cosmetic formulations. Its efficacy has been shown to supersede the hydrating capacity of urea or propylene glycol. The amount of glycerol contained in dermosoft® 1388 eco will contribute to the hydrating properties of the cosmetic product at recommended use concentrations.

Masking
The perfume ingredients in dermosoft® 1388 eco are known as masking agents. The unspecific scent does not make them first choice for use as a stand alone perfume. But the aroma is appreciated by many formulators to mask undesired odours of raw materials. The light smell will usually not add to or interfere with the perfume in the product.

Acidifying
dermosoft® 1388 eco contains two organic acids that are found in nature in many plants. As an intrinsic property of such organic acids the acidity is very low. This makes them ideal candidates for a gentle acidifying effect on human skin. Thus the natural acidic level of the skin can be maintained for a longer time. The correlation between physiological pH and healthy skin has been shown in many studies and there has been evidence that micro organisms like Propionibacterium acne and Staphylococcus aureus and even viruses are significantly reduced, by organic acids and when the normal pH on human skin is maintained stable.

Anti-inflammatory
dermosoft® 1388 eco contains a compound with known anti-inflammatory effect that can act soothing on irritated skin. The anti-inflammatory effect of this compound has been shown to be comparable to other agents like phospholipid analogues, sterols, or vitamin E analogues.

Antimicrobial efficacy
Although dermosoft® 1388 eco may be employed for many of its additional valuable cosmetic functions, the excellent antimicrobial activity will very well improve the microbiological stability. In most cases it will allow to eliminate unnecessary preservatives from the product. As can be seen in the following figures all relevant germs are destroyed quickly and effectively. The blend contains one compound with bactericidal properties while the co-active shows excellent fungicidal action. Together the two actives display a very good and broad anti microbial performance. For an optimum efficacy the pH of the formulation should not be higher than 5.5.
Multifunctional Additives

dermosoft® 1388 eco

All the microbiological tests are done in an independent external and certified laboratory according to the Pharmacopoeia Europea. The following examples show test results of challenge tests with state of the art products that contain Dermosoft®.

Many cosmetic formulations can be stabilised with dermosoft® 1388 eco

Figure 1: Challenge Test with Shampoo Baby Care stabilized with 3.5% dermosoft® 1388 eco

Figure 2: Challenge Test with Skin Serum stabilized with 2.25% dermosoft® 1388 eco
The combination of mild masking agents in a skin friendly and moisturizing solution form our dermosoft® 1388 eco. This furnishes your formulation with a reliable biological stabilization. Just add dermosoft® 1388 eco to your formulation and adjust the pH to the recommended level. Using dermosoft® has never been easier!
### Multifunctional Additives

**dermosoft® 1388eco**

**Natural Skin Serum**

**Claims:**
- Refreshing
- Smooth and gentle skin feel

<table>
<thead>
<tr>
<th>Phase</th>
<th>Ingredient</th>
<th>INCI</th>
<th>Supplier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Deionised Water</td>
<td>Agua</td>
<td>Sanofi</td>
<td>80.10</td>
</tr>
<tr>
<td></td>
<td>Hydrolat Hamamelis</td>
<td>Hamamelis Virginiana Flower Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Glycerol</td>
<td>Glycerin</td>
<td></td>
<td>3.00</td>
</tr>
<tr>
<td>A1</td>
<td>Amigel Granulat</td>
<td>Sclerotium Gum</td>
<td>Alban Muller</td>
<td>0.20</td>
</tr>
<tr>
<td>A2</td>
<td>Amisol Soft</td>
<td>Behenyl Alcohol, Glyceryl Stearate, Lecithin, Glycine Soja (Soybean) Sterols</td>
<td>Lucas Meyer*</td>
<td>3.00</td>
</tr>
<tr>
<td>B</td>
<td>Dermofeel® E 74 A non-GMO</td>
<td>Tocopheryl Acetate, Helianthus Annuus (Sunflower) Seed Oil</td>
<td>Dr. Straetmans</td>
<td>0.50</td>
</tr>
<tr>
<td></td>
<td>Dermofeel® GSC</td>
<td>Glycerly Stearate Citrate</td>
<td>Dr. Straetmans</td>
<td>0.50</td>
</tr>
<tr>
<td></td>
<td>Apricot Kernel Oil</td>
<td>Prunus Armeniaca Kernel Oil</td>
<td>Henry Lamotte</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>Dermofeel® MCT</td>
<td>Tricaprylin</td>
<td>Dr. Straetmans</td>
<td>4.00</td>
</tr>
<tr>
<td>C</td>
<td>Parfum Baby Cotton 449264 (free of SCCNFP sensitizer)</td>
<td>Parfum</td>
<td>Symrise</td>
<td>0.20</td>
</tr>
<tr>
<td>D</td>
<td>dermosoft® 1388 ECO</td>
<td>Parfum</td>
<td>Dr. Straetmans</td>
<td>3.00</td>
</tr>
<tr>
<td>E</td>
<td>Dermofeel® G10 LW</td>
<td>Polyglyceryl-10 Laurate, Agua</td>
<td>Dr. Straetmans</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Manufacturing Procedure:**
2. Add Amisol Soft and keep at 75 – 80°C under stirring for approx. 20 min. (hydration step).
3. Heat phase B up to 75°C and add to batch under stirring. Mix slowly during 5 min. (emulsification step).
4. Homogenize for approx. 2 min. using an Ultra-Turrax (homogenization step).
5. Cool down under medium stirring and add C, D and E below 40°C. Adjust pH if necessary.

**Specification Values:**
- Appearance: soft spryable lotion
- pH: 5.2 – 5.4
- Viscosity (Brookfield: LV 4; 10 rpm): approx. 4,000 – 6,000 mPas.
- Centrifugation (4,000 rpm, 20 min.): no separation.

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

**Microbiological stability:** proven

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**Multifunctional Additives**

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**Natural Body Spray**

**Claims:** Milky sprayable Liquid
Preservative free

<table>
<thead>
<tr>
<th>Phase</th>
<th>Ingredient</th>
<th>INCI</th>
<th>Supplier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Deionised Water</td>
<td>Aqua</td>
<td></td>
<td>70.90</td>
</tr>
<tr>
<td></td>
<td>Glycerol</td>
<td>Glycerin</td>
<td></td>
<td>5.00</td>
</tr>
<tr>
<td></td>
<td>Dermosoft® 1388 ECO</td>
<td>Parfum</td>
<td>Dr. Straetmans</td>
<td>3.50</td>
</tr>
<tr>
<td>A1</td>
<td>Dermofeel® G10LW</td>
<td>Polyglycerol-10 Laurate, Aqua</td>
<td>Dr. Straetmans</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td>Amaze XT</td>
<td>Dehydroxanthan Gum</td>
<td>National Starch</td>
<td>0.20</td>
</tr>
<tr>
<td>B</td>
<td>Dermofeel® GSC</td>
<td>Glyceryl Stearate Citrate</td>
<td>Dr. Straetmans</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td>Dermofeel® MCT</td>
<td>Tricaprylin</td>
<td>Dr. Straetmans</td>
<td>8.00</td>
</tr>
<tr>
<td></td>
<td>Sunflower Seed Oil</td>
<td>Helianthus Annuus (Sunflower) Seed Oil</td>
<td></td>
<td>8.00</td>
</tr>
<tr>
<td></td>
<td>Dermofeel® Toco 70</td>
<td>Tocopherol, Helianthus Annuus (Sunflower) Seed Oil</td>
<td>Dr. Straetmans</td>
<td>0.10</td>
</tr>
<tr>
<td>C</td>
<td>Parf. Baby Cotton</td>
<td>449264 (free of SCSNP sensitizer)</td>
<td>Symrise</td>
<td>0.30</td>
</tr>
</tbody>
</table>

**Total:** 100.00

**Manufacturing Procedure:**
1. Heat phase A up to 78°C under stirring. Disperse Amaze XT.
2. Heat phase B up to 78°C. Emulsify phase B into phase A under stirring.
3. Homogenize for 1 – 2 min. using Ultra Turrax.
4. Start to cool down under medium stirring.
5. Add perfume below 40°C and adjust pH to 5.2 – 5.5.

**Specification Values:**
- **Appearance:** thin, white lotion.
- **pH:** 5.2 – 5.5.
- **Viscosity (Brookfield: LV 4; 10 rpm):** approx. 1000 mPa.s.
- **Centrifugation (5000rpm, 2900RZB, 10 min.):** no separation.

**Microbiological stability:** proven.

**Stability:** more than 3 month stable at 20°C, 40°C and 4°C

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**Disclaimer:**
The information contained herein is meant to demonstrate how our products can be used. The given data are suggestions without any guarantee aimed to support customers' development. As production conditions at our customers' facilities are beyond our control we refuse to accept any liability involved in the use of our products. Please observe possible third party patent rights.
# Multifunctional Additives

**dermosoft® 1388 eco**

## Natural Hydrating Skin Fluid

**Claims:**
- Alcohol free
- Anti-Ageing
- Hydrating and Vitalizing

<table>
<thead>
<tr>
<th>Phase</th>
<th>Ingredient</th>
<th>INCI</th>
<th>Supplier</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Deionised Water</td>
<td>Aqua</td>
<td>79.20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dermofeel® PA-3</td>
<td>Sodium Phytate, Aqua</td>
<td>Dr. Straetmans</td>
<td>0.10</td>
</tr>
<tr>
<td></td>
<td>Glycerol</td>
<td>Glycerin</td>
<td>10.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dermosoft® 1388 ECO</td>
<td>Parfum</td>
<td>Dr. Straetmans</td>
<td>3.00</td>
</tr>
<tr>
<td>B</td>
<td>Dermosoft® GMCY</td>
<td>Glyceryl Caprylate</td>
<td>Dr. Straetmans</td>
<td>0.50</td>
</tr>
<tr>
<td></td>
<td>Dermofeel® G 10 LW</td>
<td>Polyglyceryl-10 Laurate, Aqua</td>
<td>Dr. Straetmans</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td>Frag. Ringelblume Natura 0606-250</td>
<td>Parfum, Coumarin, Geraniol, Linalool, Citronellol, Limonen</td>
<td>Dülberg Konzentra</td>
<td>0.20</td>
</tr>
<tr>
<td>C</td>
<td>Laminactine</td>
<td>Glycerin, Aqua, Lyssolecithin, Perilla Frutescens (Perilla) Seed Oil</td>
<td>Lucas Meyer*</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td>Hydraporine Nature</td>
<td>Betaine, Aqua, Glycerin, Hydrogenated Lecithin, Honey, Pectin</td>
<td>Lucas Meyer*</td>
<td>2.00</td>
</tr>
</tbody>
</table>

| Total | 100.00 |

**Manufacturing Procedure:**
1. Premix phases A.
2. Dissolve components of phase B in Dermofeel® G10 LW and mix until all ingredients are dissolved clearly.
3. Add phase A slowly to phase B under stirring.
4. Add part C and adjust pH if necessary.

**Specification Values:**
- **Appearance:** milky, translucent liquid.
- **pH:** 5.2 – 5.4.
- **Stability:** more than 3 month stable at 40°C, 20°C and 4°C.
- **Microbiological Stability:** proven.

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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
dermosoft® 1388 eco is not irritating, not sensitizing and does not contain genetically modified material, dioinex, phthalates, BSE-related material or CMR-material. Without the 26 sensitizers, it is in full compliance with the IFRA codes and the 7th amendment.

Packing units
dermosoft® 1388 eco is available in 10 kg and 25 kg canisters and in 200 kg drums.

Environmental Information
dermosoft® 1388 eco is made from environmentally and toxicologically unobjectionable raw materials. dermosoft® 1388 eco is fully biodegradable and has not been tested on animals.

Handling and storage
In closed original containers dermosoft® 1388 eco can be stored for at least 3 years. dermosoft® 1388 eco does not need to be preserved.

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6 Singh N, et al., Crystal Structures of the Complexes of a Group IIA Phospholipase A₂ with Two Natural Anti-inflammatory agents, Anisic Acid, and Atropine Reveal a Similar Mode of Binding, *Proteins*, 2006, 64: 89–100
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