Sinerga

SKIN EVOLUTION

# EMULSIFIERS SOLUTIONS

# GREEN PHYLOSOPHY

Sinerga has always accorded particular importance to developing and promoting green ingredients respecting both the skin and the environment.
The aim of our responsible approach is to create and develop new raw materials which are derived from renewable resources and are sustainable with equal performance and unique benefits. Sinerga formulation expertise answers effectively to the latest market and technical trends. We follow a “green phylosophy” in order to develop a wide range of emulsifiers able to satisfy both the formulators and the market needs.

## VEGETABLE ORIGIN:

All Sinerga emulsifiers are 100% vegetable origin and are obtained from renewable resources in order to reduce environmental impact. The formulators have the opportunity to create organic and green emulsions with unique technical advantages.

## HIGHLY SKIN COMPATIBLE:

The liquid crystal network of Sinerga emulsifiers enhances the adhesion and the compatibility with the skin structure improving formulations properties and efficacy.

## SAFE PROFILE:

Sinerga emulsifiers avoid irritating and side effects for the skin.
All these ingredients are suitable for all types of skin, from normal to sensitive.

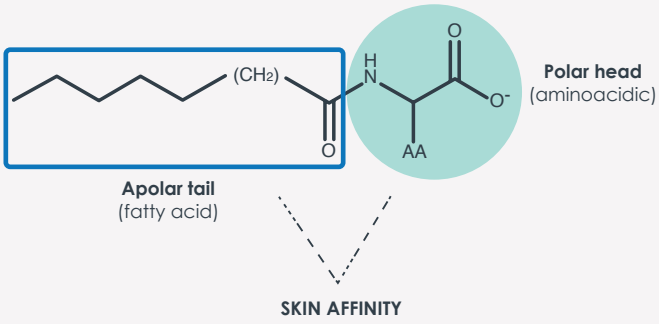
## FREE FROM:

- PEG – PPG
- PETROLATUM
- PARAFFINS
- PARABENS
- ETHOXYLATED ALCOHOLS
- ACRYLAMIDES
- SILICONE DERIVATIVES
- SULFATES

# SINERGA PATENTED FORMULATION TECHNOLOGIES

## • LI.AMI.ACI

### LIPOAMINOACIDS PATENTED TECHNOLOGY SYSTEM




Based on the creation of Lipoaminoacids: Plant-origin molecules characterised by high similarity to the skin layer's structure in order to enhance dermoaffinity, delivery of actives and effectiveness.

- A high lipid content gives them higher moisturizing, nourishing properties for a velvety and nicely enveloping touch.

- High stability, easy to formulate, easy to handle, better skin compatibility, deeper skin hydration, high sensorial properties, sublime texture, 100% vegetable.

## • M.O.R.E. TECHNIQUE

### (MICROWAVE OVEN REACTION ENHANCEMENT)

- Patented Technology characterized by a low environmental impact. Based on the microwave irradiations, it allows to obtain chemical reactions and in less time than the conventional process and without using solvents.

- The irradiation by the microwave lenght (3mm – 100 cm) is directed to the material with high vibrational, rotational and speed capacity. The derivated cinetic effect activates the molecules, enhancing the final reaction.

- Shorter reaction times, less thermal degradation, better reaction selectivity, absence of chemical solvents, less energy, eco friendly.

**Sinerga R&D Lab** has developed a wide range of emulsifiers combining effectively high technical performances with a sustainable and eco-friendly approach.

## NANOCREAM®

**O/W EMULSIFIER**

INCI NAME:

Potassium Lauroyl Wheat Amino Acids, Palm Glycerides, Capryloyl Glycine

## SENSOCREAM®

**O/W EMULSIFIER**

INCI NAME:

Sunflower Seed Oil Glycerides, Potassium Lauroyl Wheat Amino Acids, Capryloyl Glycine

## HITECREAM®3000

**O/W EMULSIFIER**

INCI NAME:

Potassium Palmitoyl Hydrolyzed Oat Protein, Behenyl Alcohol, Palm Glycerides, Sodium Stearoyl Glutamate, Sucrose Palmitate

## PROLIX RB®

**O/W EMULSIFIER**

INCI NAME:

Polyglyceryl-3 Rice Branate

## SUPREME®

**O/W EMULSIFIER**

INCI NAME:

Polyglyceryl-3 Rice Branate, Cetearyl Alcohol, Sucrose Stearate

## PHYTOCREAM®2000

**O/W EMULSIFIER**

INCI NAME:

Potassium Palmitoyl Hydrolyzed Wheat Protein, Glyceryl Stearate, Cetearyl Alcohol

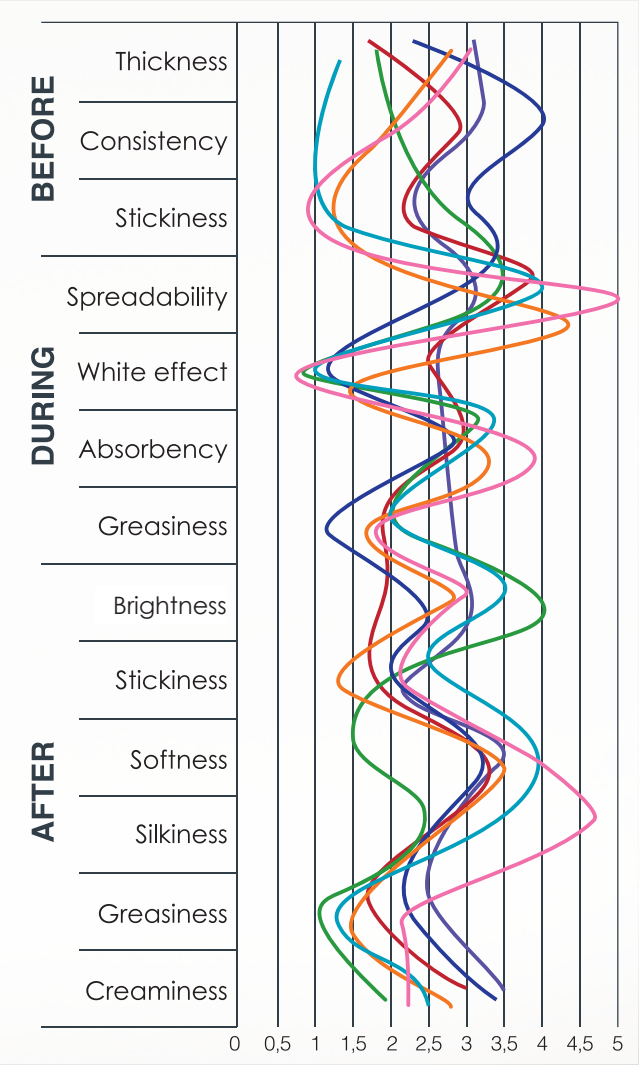
## EWOCREAM®

**W/O EMULSIFIER**

INCI NAME:

Polyglyceryl-3 Sorbityl Linseedate

# SENSORIAL PROFILE




## PROTOCOL:

10 women, duly trained, tested samples of emulsions and gave a score from 0 to 5 (0=low, 5=high) to the following charateristics:

- **BEFORE:** thickness, consistency, stickiness.
- **DURING:** spreadability, white effect, absorbency, greasiness.
- **AFTER:** brightness, stickiness, softness, silkiness, greasiness, creaminess.

## RESULTS

Each emulsifier has its own “Sensorial profile”, its own personality.
Together they meet the multiple needs of the cosmetic market.

# NANOCREAM®

Vegetable-derived O/W emulsifier for micro-emulsions. Patented.

## INCI NAME

Potassium Lauroyl Wheat Amino acids, Palm Glycerides, Capryloyl Glycine

## DESCRIPTION

A combination of **lipoaminoacids, polyglicerides and fatty acid esters** able to create **translucid micellar emulsions** with particularly fine particles dimension from 100 to 300 nm.

## PROPERTIES

Nanocream forms **stable systems** with a low interfacial tension. It doesn't lead to flocculation, sedimentation or coalescence.
Thanks to its fine particles size, Nanocream® is an **excellent carrier** for cosmetic active ingredients.

| FEATURES | BENEFITS |
|---|---|
| • Fine defined particle size<br>• Homogeneous size distribution<br>• Active ingredients carrier<br>• Wide viscosity range (adding jellifying agents)<br>• Tyndall effect<br>• Theoretical HLB: 7±1 | • High stability<br>• Fine, homogeneous emulsion without homogenization step (not stir required)<br>• Short time process<br>• Sublime texture and spreadibility<br>• Suitable for new spreadable applications |

VEGETABLE ORIGIN

SAFE PROFILE

PRESERVATIVE FREE

## FORM:

Gel

## USAGE:

5% - 10%

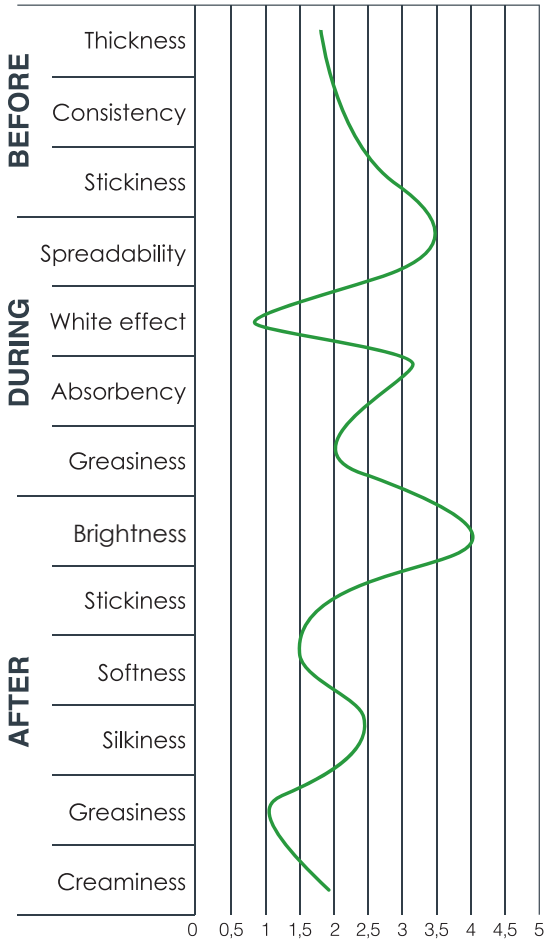
## SKIN FEELING

Its particular structure increases the absorbency without leaving a white effect. Not greasy and very light, it gives a soft and velvet skin feeling.

## COSMETIC APPLICATIONS

Ideal for: **sprayable emulsions, hyperfluid emulsions, wet wipes.**

## SENSORIAL PROFILE




## FORMULATION GUIDELINES NANOCREAM®

| INGREDIENTS | PHASE | %w/w |
|---|---|---|
| **NANOCREAM (SINERGA)** | A | 10,00 |
| Dicapryryl Ether | | 5,00 |
| Ethylhexyl Isononanoate | | 5,00 |
| Bisabolol | | 0,30 |
| **NATISOL (SINERGA)** | | 0,50 |
| Water | B | 25,00 |
| Water | C | q.s. to 100 |
| Ammonium Acryloyl-dimethyltaurate/ VP Copolymer | C' | 2,00 |
| PRESERVATIVES | | q.s. |
| Phantenol, Glycerin | D | 1,00 |
| Fragrance | E | 0,40 |

### METHOD

Weight phase A, mix until homogeneous aspect and heat up to 70°C. Weight phase B and heat up to 70°C; add to phase A under low stirring (see the light blue colour of the emulsion).
Weight phase C and heat to 35°-40°C and add to A+B.
Add C' under homogeniser.
Cool down at room temperature and add D and E under mixing.

### CHARACTERISTICS

| | |
|---|---|
| Aspect | Fluid emulsion |
| Colour | White |
| Odour | Characteristic |
| pH | 6,00 |
| Viscosity Viscotester VT-02 | 1.800 mPa.s |

# SENSOCREAM®

Vegetable-derived O/W emulsifier for translucid emulsions with the tyndall effect. Patented.

## INCI NAME

Potassium Lauroyl Wheat Amino acids, Sunflower Seed Oil Glycerides, Capryloyl Glycine

## DESCRIPTION

Sensocream is an anionic/non ionic emulsifier based on **natural origin components**. It is a combination of vegetable-based substances such as lipoaminoacids and sunflower oil glycerides, which are ideal to obtain **translucid emulsions** with the tyndall effect.
It takes advantage of the sunflower oil **antioxidant and soothing properties.**

## PROPERTIES

Versatile emulsifier able to form micro-emulsions with a high stability and **low interfacial tension** without sedimentation or flocculation.
Thanks to its fine particles size, it is a good carrier for active and make up ingredients.

| FEATURES | BENEFITS |
|---|---|
| • Wide range of viscosity with jellifying agents<br>• Fine, homogeneous emulsion<br>• Palm oil free<br>• Theoretical HLB: 7±1 | • High stability<br>• Silky texture and high spreadibility<br>• Excellent disperdent for pigments in make-up products<br>• Antioxidant and soothing properties of sunflower oil<br>• Active ingredients carrier |

VEGETABLE ORIGIN

SAFE PROFILE

PRESERVATIVE FREE

## FORM:

Gel

## USAGE:

5% - 10%

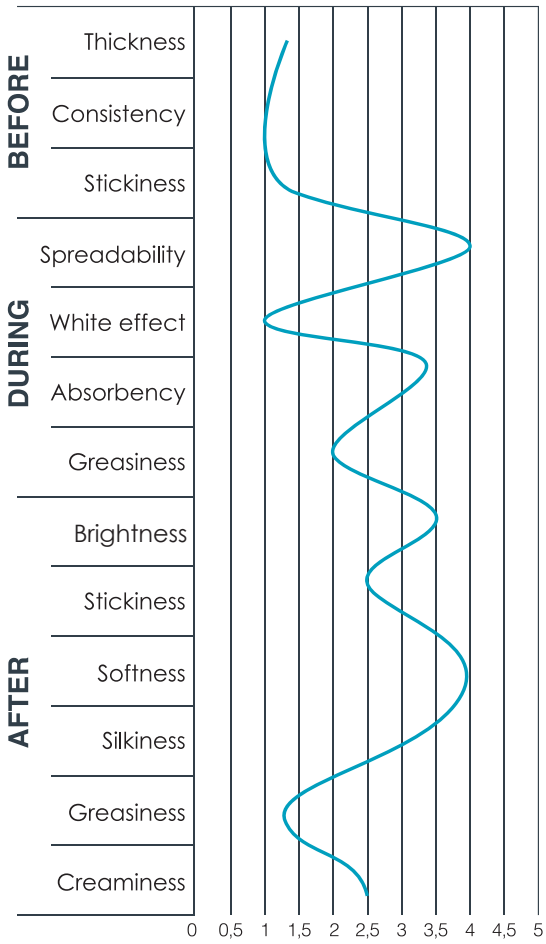
## SKIN FEELING

A silky, light and evanescent skin feeling. It absorbs very quickly without a sticky or greasy sensation.

## COSMETIC APPLICATIONS

Ideal application: **from serum gel to emulgel** (excellent wetting agent for pigment, reflecting powders and filters).

## SENSORIAL PROFILE




## FORMULATION GUIDELINES WITH SENSOCREAM®

| INGREDIENTS | PHASE | %w/w |
|---|---|---|
| **SENSOCREAM (SINERGA)** | A | 5,00 |
| Cetearyl Isononanoate | | 5,00 |
| Caprylic/Capric Triglyceride | | 5,00 |
| Dicaprylyl Ether | | 4,00 |
| Dimethicone | | 1,00 |
| Water | B | q.s. to 100 |
| Disodium EDTA | | 0,10 |
| Carbomer | C | 0,80 |
| PRESERVATIVES | D | q.s. |
| Aminomethyl Propanol | E | 0,65 |
| Fragrance | | 0,40 |

### METHOD

Weight phase A; heat at 40°C. Weight phase B and heat at 40°C; add C under mixer until homogeneous system. Then add phase A to B+C under mixer. Stirring until room temperature and add phase D and E.

### CHARACTERISTICS

| | |
|---|---|
| Aspect | Semiconsistent Emulsion |
| Colour | White |
| Odour | Characteristic |
| pH | 6,35 |
| Viscosity Viscotester VT-02 | 4.000 mPa.s |

# HITECREAM®3000

O/W emulsifier with vegetable based ingredients.

## INCI NAME

Potassium Palmitoyl Hydrolyzed Oat Protein, Behenyl Alcohol, Palm Glycerides, Sodium Stearoyl Glutamate, Sucrose Palmitate

## DESCRIPTION

Vegetable origin emulsifier composed of a **well balanced blend** of natural origin lipids and lipoproteins. It forms a protective layer able to improve the **skin hydration.**

## PROPERTIES

Its special structure forms a liquid crystal network which improves the **spreadability** and the **adesion on the skin.** This emulsifier allows to obtain a **multilamellar structure** which gives a high stability to the formulation enhancing a soothing and refreshing sensation during the application.

| FEATURES | BENEFITS |
|---|---|
| • Soft touch formulations<br>• Compatible with different rheological additives<br>• Light, fluid emulsions<br>• Compatible with different lipophilic substances (up to 30%)<br>• Reliable also with no co-emulsifiers<br>• Theoretical HLB: 10±1 | • Easy to formulate and handle<br>• High Hydration<br>• High adhesion to the skin<br>• High spreadability<br>• High stability |

VEGETABLE ORIGIN

SAFE PROFILE

PRESERVATIVE FREE

## FORM:

Wax pellets

## USAGE:

5% - 10%

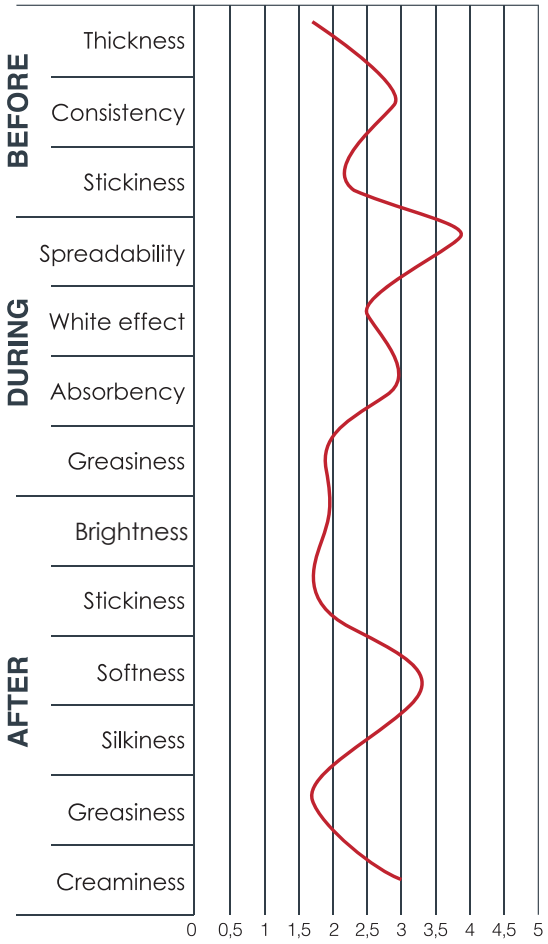
## SKIN FEELING

Its **light texture** and its **high spreadability** give to the emulsion a pleasant velvet touch, a high hydration and a feeling of **freshness** during the application.

## COSMETIC APPLICATIONS

Ideal for: **fluid emulsions, milks and body lotions.**

## SENSORIAL PROFILE




## FORMULATION GUIDELINES WITH HITECREAM®3000

| INGREDIENTS | PHASE | %w/w |
|---|---|---|
| **HITECREAM®3000 (SINERGA)** | A | 10,00 |
| Cetearyl Isononanoate | | 5,00 |
| Caprylic/Capric Triglyceride | | 5,00 |
| Dicaprylyl Ether | | 4,00 |
| Dimethicone | | 1,00 |
| Water | B | q.s. to 100 |
| Disodium EDTA | | 0,10 |
| Carbomer | C | 0,20 |
| Sodium Hydroxide | D | 0,07 |
| PRESERVATIVES | | q.s. |
| Fragrance | | 0,40 |

### METHOD

Weight phase A; heat at 70°C. Weight phase B and heat at 70°C; add C under mixer until homogeneous system. Then add phase A to B+C under stir. Mixing until room temperature and add phase D and E.

### CHARACTERISTICS

| | |
|---|---|
| Aspect | Semiconsistent Emulsion |
| Colour | White |
| Odour | Characteristic |
| pH | 5,92 |
| Viscosity Viscotester VT-02 | 7.400 mPa.s |

# PROLIX RB®

Non-ionic emulsifier. Derived from 100% renewable sources: respectful of the skin and the environment.

## INCI NAME

Polyglyceryl-3 Rice Branate

## DESCRIPTION

Non-ionic polyglyceryl derived from fatty acids from rice bran oil obtained by **M.O.R.E. technique**, which reduces the enviromental impact manufacturing processes: it is an emulsifier in **harmony with nature**, which respects the skin and the environment.
PROLIX RB® derives from 100% vegetable renewable sources:

- ✓ Glycerin
- ✓ Fatty acids from rice
- ✓ Arginine

## PROPERTIES

The specific linkage between the hydrophilic and the lipophilic chain gives a **perfect stability** to the emulsion.
It's compatible with different oils and rheological additives in order to give a **wide range of consistency** to the formulation.

## FEATURES

- Complies to Cosmos standards
- No use of other co-emulsifiers
- Compatible with different oils
- Compatible with different rheological additives
- Palm oil free
- Theoretical HLB: 10±1

## BENEFITS

- Wide range of viscosity (from fluid to consistent emulsion) and applications
- Enhanced moisturizing effect
- Rice nourishing properties

VEGETABLE ORIGIN

SAFE PROFILE

PRESERVATIVE FREE

COSMOS APPROVED

## FORMS:

Wax pellets

## USAGE:

3% - 4% in milks or lotions
4% - 6% in creams

*Not available for Italy and Spain.*

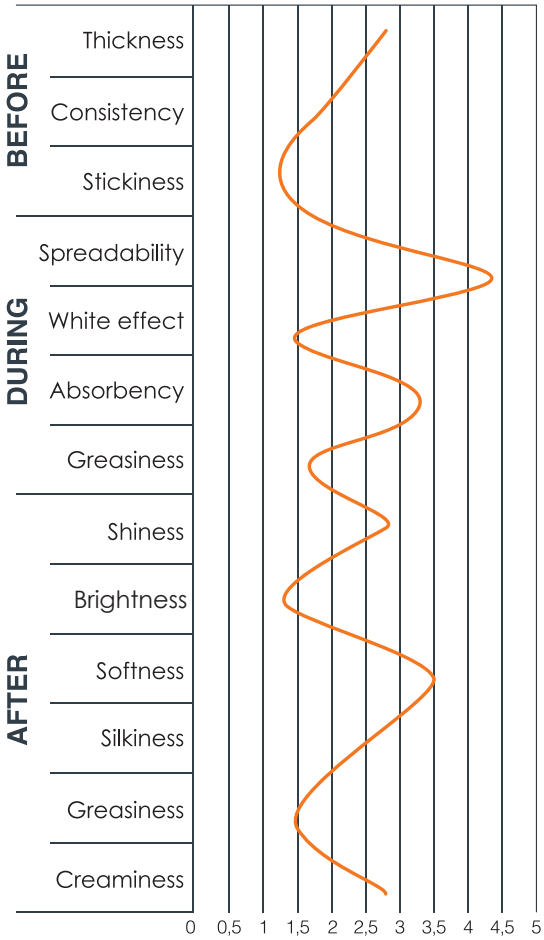
## SKIN FEELING

It gives a very light texture with a pleasant velvety touch. With very good spreadability and adhesion on the skin, it leaves the skin hydrated with an excellent end-feel.

## COSMETIC APPLICATIONS

Ideal for: **day-creams, long lasting moisturizers, 100% green formulations.**

## SENSORIAL PROFILE




## FORMULATION GUIDELINES WITH PROLIX RB®

| INGREDIENTS | PHASE | %w/w |
|---|---|---|
| **PROLIX RB (SINERGA)** | A | 5,00 |
| Dicapryryl Ether | | 5,00 |
| Cetearyl Isononanoate | | 5,00 |
| Cetearyl/Capric Triglyceride | | 5,00 |
| Dimethicone | | 1,00 |
| Water | B | q.s. to 100 |
| Glycerin | | 4,00 |
| Carbomer | C | 0,20 |
| Preservatives | D | q.s. |
| Sodium Hydroxide | | 0,03 |
| Fragrance | E | 0,30 |

### METHOD

Weight phase A; heat at 70°C. Weight phase B and heat at 70°C; add C under mixer untile homogeneous system. Then add phase A to B+C under stir. Mixing until room temperature and add phase D and E.

### CHARACTERISTICS

| | |
|---|---|
| Aspect | Semiconsistent emulsion |
| Colour | White |
| Odour | Characteristic |
| pH | 5,90 |
| Viscosity Viscotester VT-02 | 11.000 mPa.s |

# SUPREME®

100% from vegetable sources: a perfect balance between high emulsifying properties and an excellent skin feeling.

## INCI NAME

Polyglyceryl-3 Rice Branate, Cetearyl Alcohol, Sucrose Stearate

## DESCRIPTION

**100% Vegetable** non-ionic emulsifier obtained by the combination of polyglyceryl derivative of fatty acids from rice bran oil, cetearyl alcohol and a sugar derivative. It forms particularly light and soft O/W emulsions that are pleasantly velvety to the touch. Thanks to its characteristics, SUPREME® is the key element for sensorial properties and vegetable origin.

## PROPERTIES

SUPREME® is very well balanced to offer **outstanding emulsifying properties**. The particular structure gives to the formulation a perfect stability and an excellent skin feeling thanks to its nourishing and softening properties.

## FEATURES

- Eco-Bio-Sustainable Emulsifier: 100% vegetable origin
- No need to use other co-emulsifiers
- Compatible with different % of lipidic phase, up to 35%
- Palm oil free
- Theoretical HLB: 11±1

## BENEFITS

- High compatibility with physical and chemical sun filters
- Rice bran oil nourishing properties
- Silky and soft touch

VEGETABLE ORIGIN

SAFE PROFILE

PRESERVATIVE FREE

COSMOS APPROVED

## FORM:

Waxy flakes

## USAGE:

3% - 4% in milks or lotions
4% - 6% in creams

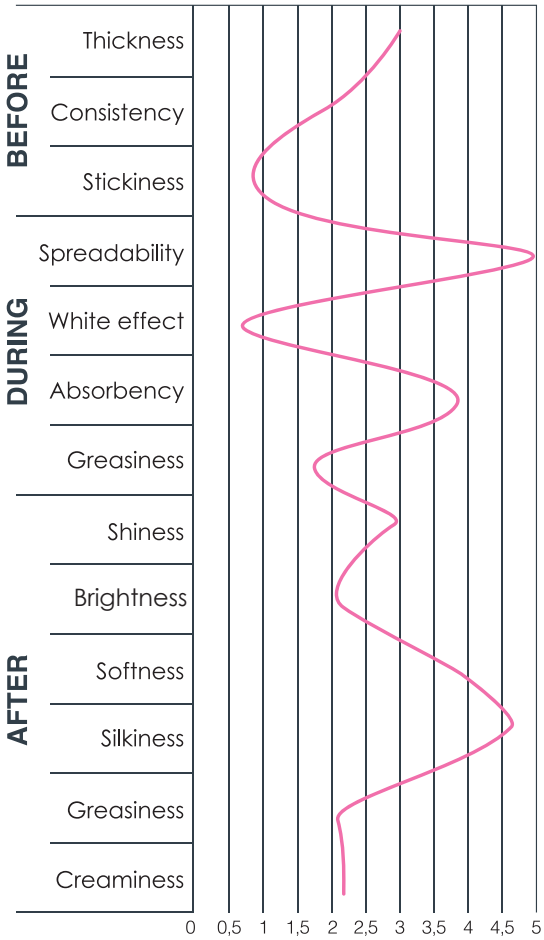
## SKIN FEELING

Its high spreadability and absorbency leaves the skin soft and silky without greasiness or white effect.

## COSMETIC APPLICATIONS

Ideal for: **soft creams, city filters, sun-care creams.**

## SENSORIAL PROFILE




## FORMULATION GUIDELINES WITH SUPREME®

| INGREDIENTS | PHASE | %w/w |
|---|---|---|
| **SUPREME® (SINERGA)** | A | 5,0 |
| Dicaprylyl ether | | 4,0 |
| Caprylic/capric triglyceride | | 5,0 |
| Dimethicone | | 1,0 |
| Cetearyl isononanoate | | 5,0 |
| Lecithin,Tocopherol,Ascorbyl palmitate,Citric acid | | 0,05 |
| Water | B | 74,32 |
| Glycerin | | 4,0 |
| Disodium edta | | 0,1 |
| Carbomer | C | 0,2 |
| Preservatives | D | 1,0 |
| Sodium hydroxyde | E | 0,03 |
| Fragrance | F | 0,3 |

### METHOD

Weight phase A; heat at 70°C. Weight phase B, heat at 70°C and add phase C under mixer until homogeneous system; add phase A to B under fast stirring until homogeneous system. Cool down until room temperature and add phases D, E and F. Check pH and viscosity.

### CHARACTERISTICS

| | |
|---|---|
| Aspect | Emulsion |
| Colour | White/Ivory |
| Odour | Characteristic |
| pH | 6,10 |
| Viscosity (Brookfield:spindle 6 rpm 10) | 33800 mPa.s |

# PHYTOCREAM®2000

Vegetable-based emusifier. Restorative and nutrient properties in a liquid crystal network.

## INCI NAME

Potassium Palmitoyl Hydrolyzed Wheat Protein, Glyceryl Stearate, Cetearyl Alcohol

## DESCRIPTION

**Non ionic/anionic O/W emulsifier.** Its **lipid fraction** fits perfectly the stratum corneum, restoring the **structural balance** of the lipid film. The obtained creams have great **restorative** and **nourishing properties** derived from wheat proteins.

## PROPERTIES

Its particular structure forms a **liquid crystal network** that allows to easily formulate **stable systems.** Thanks to its properties, Phytocream® is able to contain high percentages of lipophilic substances, such as triglycerides, butters and waxes (up to 40%).

| FEATURES | BENEFITS |
|---|---|
| • It allows formulations rich in vegetable oils<br>• (from 5% to 40% as lipids)<br>Compatible with rheological additives<br>• Palm oil free<br>• Theoretical HLB: 11±1 | • Very easy to formulate and to handle<br>• Hydrated skin<br>• Reduced dryness<br>• Restorative and nourishing properties |

VEGETABLE ORIGIN

SAFE PROFILE

PRESERVATIVE FREE

ICEA COSMOS APPROVED

## FORM:

Waxy pellets

## USAGE:

4% - 10%

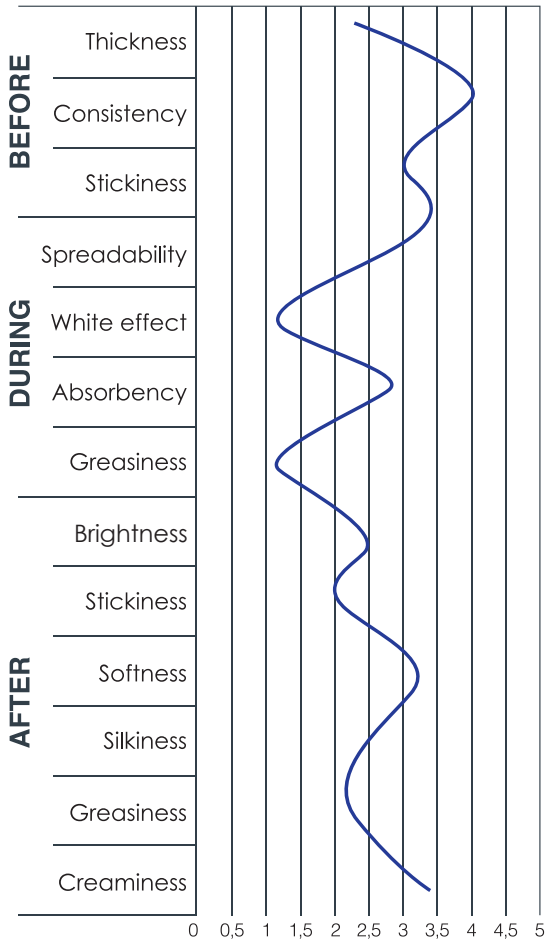
## SKIN FEELING

It leaves the skin fresh and smooth with an extraordinary moisturizing and nourishing sensation.

## COSMETIC APPLICATIONS

Ideal for: **night creams, rich emulsions, masks, balms.**

## SENSORIAL PROFILE




## FORMULATION GUIDELINES WITH PHYTOCREAM®2000

| INGREDIENTS | PHASE | %w/w |
|---|---|---|
| **PHYTOCREAM®2000** | A | 10,00 |
| Dicapryryl Ether | | 4,00 |
| Cetearyl Isononanoate | | 5,00 |
| Cetearyl/Capric Triglyceride | | 5,00 |
| Dimethicone | | 1,00 |
| Water | B | q.s. to 100 |
| Disodium EDTA | | 0,10 |
| Carbomer | C | 0,20 |
| Preservatives | D | q.s. |
| Sodium Hydroxide | | 0,06 |
| Fragrance | E | 0,40 |

### METHOD

Weight phase A; heat at 70°C. Weight phase B and heat at 70°C; add C under mixer untile homogeneous system. Then add phase A to B+C under stir. Mixing until room temperature and add phase D and E.

### CHARACTERISTICS

| | |
|---|---|
| Aspect | Consistent emulsion |
| Colour | White-Beige |
| Odour | Characteristic |
| pH | 6,25 |
| Viscosity Viscotester VT-02 | 13.000 mPa.s |

# EWOCREAM®

Organic W/O emulsifier, 100% sustainable.

## INCI NAME
Polyglyceryl-3 Sorbityl Linseedate

## DESCRIPTION
100% **sustainable non ionic W/O emulsifier** obtained by trans-esterification of glycerol and sorbitol with fatty acids derived from **Linseed oil,** by a patented microwave irradiation technique **(M.O.R.E.)** that allows to obtain chemical reactions without solvents and in less time than the conventional process.

## PROPERTIES
It forms a **polymeric structure** able to gelify with water phase giving a high stability to the formulations. It is suitable for both cold and hot emulsification processes and thanks to its emollient properties it is suitable for sensitive and delicate skins.
In **sun care** products Ewocream® enhances **water resistant** properties thanks to its hydrophobic features.

## FEATURES
- Suitable also for cold emulsification process (no waxes)
- Compatible with different oils (up to 15%, up to 20% with rheological additives)
- High stability
- Good viscosity range
- Eco-biological emulsifier
- Palm oil free
- Theoretical HLB: 5±1

## BENEFITS
- Sustainable manufacturing processes
- Energy and waste saving
- Sustainable, green claim
- Organic formulations
- Deeper skin hydration
- Nourishing effect with soft texture
- Linseed oil properties

VEGETABLE ORIGIN

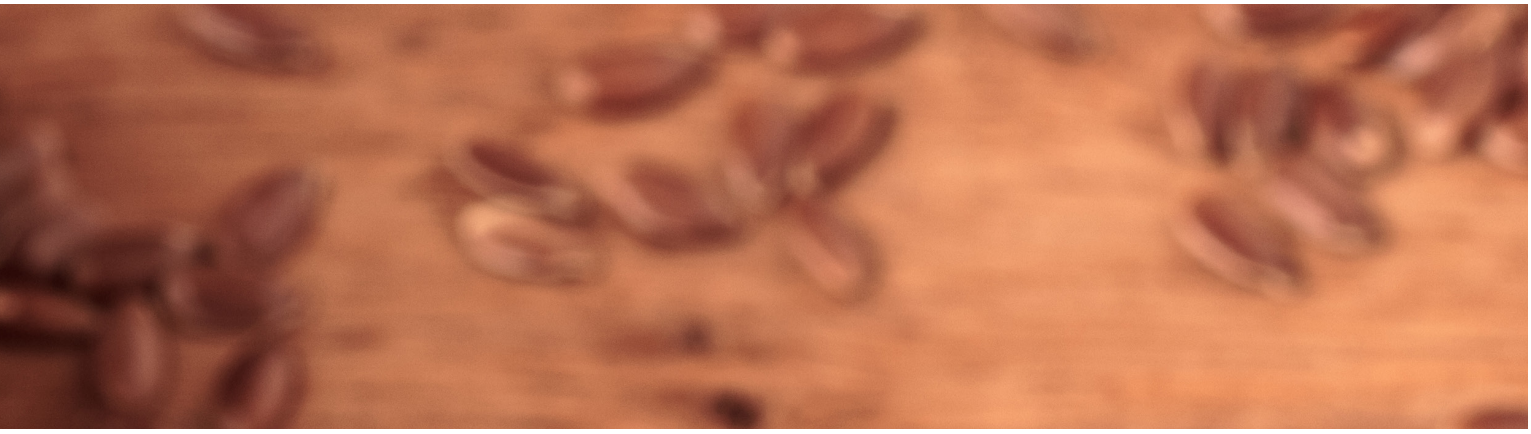
SAFE PROFILE

PRESERVATIVE FREE

COSMOS APPROVED

## FORM:
Oily liquid

## USAGE:
2% - 5%



## SKIN FEELING

Ewocream® forms rich and nourishing emulsions with a soft skin feeling. It leaves the skin supple and hydrated.

## COSMETIC APPLICATIONS

Ideal for: **hyper-nourishing creams, skin barrier creams and organic creams.**

## SENSORIAL PROFILE


## FORMULATION GUIDELINES WITH EWOCREAM®

| INGREDIENTS | PHASE | %w/w |
|---|---|---|
| **EWOCREAM (SINERGA)** | A | 5,00 |
| Squalane | | 5,00 |
| Dicaprylyl Ether | | 5,00 |
| Cetearyl Isononanoate | | 5,00 |
| Hydrogenated Castor Oil | | 0,20 |
| Dimethicone | | 1,00 |
| Water | B | q.s. to 100 |
| Magnesium Sulfate | | 1,00 |
| Preservatives | C | q.s. |
| Fragrance | | 0,40 |

### METHOD

Weight phase A; weight phase B. Add phase B to A under stirring at low speed. Homogenize for 2-3 minutes. Then add phase C.

### CHARACTERISTICS

| | |
|---|---|
| Aspect | Consistent emulsion |
| Colour | White |
| Odour | Characteristic |
| pH | // |
| Viscosity Viscotester VT-02 | 1.700 mPa.s |

Sinerga
SKIN EVOLUTION
40 YEARS
1978-2018

UNI EN ISO 14001:2015 BS OHSAS 18001:2007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