

# INFINITY GREDIENTS

Inspiring Cosmetics

Surfactants, Emulsifiers and  
Gelling Agents



# Surfactants, Emulsifiers and Gelling Agents

Surfactants, co-surfactants, emulsifiers, co-emulsifiers and gelling agents are used in almost all cosmetic products. The selection of these ingredients very much depends on whether the formulation is natural/organic or synthetic, the performance required and product category.

# Surfactants & Co-Surfactants

## Evicare<sup>®</sup> polysolve 10L

(INCI: Polyglyceryl-10 Laurate, Aqua, Citric Acid)

Evicare<sup>®</sup> polysolve 10L is a natural PEG-free solubiliser, co-emulsifier and co-surfactant. It can be used in Body Washes, Shampoos, Micellar Waters, Tonics and Lotions. The active ingredient is Polyglyceryl-10 Laurate, which is a non-ionic monoester of 10 glycerin units and lauric acid.

Recommended usage level: Co-Emulsifier: 1.5 – 3%; Co-Surfactant: 1 – 30% depending on formulation type

## Evicare<sup>®</sup> polysolve 4C

(INCI: Polyglyceryl-4 Caprate)

Evicare<sup>®</sup> polysolve 4C can be used as a natural solubiliser and will create a milky to translucent solution. Especially suitable for very polar emollients. Due to its non-irritant properties it can also be used as a co-surfactant for mild rinse-off formulations, such as micellar waters, liquid soaps as well as face and body washes.

It can also be used as a co-emulsifier as it has some self-emulsifying properties, making it ideal for self-emulsifying bath oils or cleansing oils. With its refattening characteristics Evicare<sup>®</sup> polysolve 4C will improve the sensory quality of every formulation and will leave the skin nourished without leaving a sticky skin feel.

Recommended usage level: 1-20%

## Evicare<sup>®</sup> polysolve 10L 100

(INCI: Polyglyceryl-10 Laurate)

Evicare<sup>®</sup> polysolve 10L 100 is a natural PEG-free solubiliser, co-emulsifier and co-surfactant based on vegetable glycerin. It can be used in Body Washes, Shampoos, Micellar Waters, Tonics and Lotions. The active ingredient is Polyglyceryl-10 Laurate, which is a non-ionic monoester of 10 glycerin units and lauric acid.

Recommended usage level: Co-Emulsifier: 1.5 – 3%; Co-Surfactant: 1 – 30% depending on formulation type

## Evicare<sup>®</sup> polysolve 4C 90

(INCI: Polyglyceryl-4 Caprate, Aqua)

Evicare<sup>®</sup> polysolve 4C 90 can be used as a natural solubiliser and will create a milky to translucent solution. Especially suitable for very polar emollients.

Due to its non-irritant properties it can also be used as a co-surfactant for mild rinse-off formulations, such as micellar waters, liquid soaps as well as face and body washes. It can also be used as a co-emulsifier as it has some self-emulsifying properties, making it ideal for self-emulsifying bath oils or cleansing oils.

With its refattening characteristics Evicare<sup>®</sup> polysolve 4C 90 will improve the sensory quality of every formulation and will leave the skin nourished without leaving a sticky skin feel.

Recommended usage level: 1-20%

## FOAMIN'TEA

(INCI: Camellia oleifera seed extract)

FOAMIN'TEA is a 100% natural and upcycled plant powder with surfactant assets and is a by-product of the tea seeds oil extraction. Thanks to its properties, FOAMIN'TEA can replace your usual surfactant to create a generous foaming effect, with cleaning and antimicrobial actions. This anionic surfactant is ideal for use in a variety of applications including: dry cleansers, micellar waters, shower gels, shampoos, cleaning pastes and toothpastes.

Recommended usage level: TBC

## Green CAPB-B

(INCI: Cocamidopropyl betaine)

The Green CAPB-B is obtained by the crude babaçu oil. This oil is rich in lauric, myristic and oleic fatty acids. This allows the actives products presents in the formulation to be better absorbed by the hair, enhancing its effects. In addition, the oil is known for its emollient properties and for its lightness in the hair fiber, being absorbed quickly without affecting its movement or leaving them oily.

The Green CAPB-B has excellent dermal compatibility and associated with anionic surfactants, allow a synergistic reduction of irritability to the eyes and skin, brings a soft and creamy foam, besides that, it is naturally more viscous. Can be used in clear and pearly shampoos formulations, formulations for kids, shower gel, shower foam, liquid soaps.

Recommended usage level: 1 - 5% hair care and 1 - 8% skin care.

## Green Behenic

(INCI: Behenamidopropyl Dimethylamine)

Green Behenic is a high performance conditioning agent with excellent sensory properties, which is adsorbed by the negatively charged surface of the hair, without leaving residues or weighing the hair. It gives high, wet and dry, combability, soft touch and reduced frizz and volume.

Recommended usage level: 0.5 - 2%

## Green Cocoamphoacetate B

(INCI: Sodium Babassuamphoacetate)

Green Cocoamphoacetate B (from Babaçu oil) is a mild amphoteric vegetal surfactant (35 - 40% active) that is Cosmos certified. It is a multi-functional ingredient that can be used in a variety of personal and hair care applications as well as baby/ kids care.

Rich in lauric, myristic and oleic fatty acids, its benefits of application to the skin and hair are superior to the conventional product of the market.

Recommended usage level: 3%

## TI-NatSurf® BW

(INCI: Aqua (Water), Decyl Glucoside, Sodium Myristoyl Sarcosinate, Cocamidopropyl Hydroxysultaine, Sodium Cocoyl Amino Acids (Apple))

TI-NatSurf® BW is designed for formulating premium range of high-end bath, body, and hair products. It may be used as the primary or as the secondary surfactant offering excellent hydrophobe compatibility without compromising foam integrity.

It has excellent compatibility with traditional anionic systems, such as lauryl and laureth sulphates and a variety of sulphonates, making it an ideal choice for secondary surfactant replacement, to improve foam characteristics of a system.

Its uncompromising foam performance in the presence of natural polar oils, makes it the ideal candidate in the preparation of moisturising bath products offering exception post-rinse sensory.

Recommended usage level: 25 – 50%

## TI-NatSurf® FHS

(INCI: Aqua (Water), Caprylyl/ Capryl Glucoside, Sodium Lauroyl Sarcosinate, Decyl Glucoside, Cocamidopropyl Hydroxysultaine, Sodium Cocoyl Amino Acids (Apple))

TI-NatSurf® FHS is specifically designed for use in low viscosity aerated pump foaming systems. It may be used as the primary or as the secondary surfactant in a variety of sulphate-free toiletry preparations using aerated pump foaming systems as their mode of delivery.

It has excellent compatibility with traditional anionic systems, such as lauryl and laureth sulphates and a variety of sulphonates. Its hydrophobe compatibility allows the formulation of crystal clear micro-emulsions or stable opaque dispersions with emollient esters, and other natural polar oils.

Recommended usage level: 25 - 50%

## TI-NatSurf® QCB

(INCI: Aqua (Water), Cocamidopropyl Hydroxysultaine, Myristamine Oxide, Caprylyl/ Capryl Glucoside, Decyl Glucoside)

The TI-NatSurf® QCB is a uniquely designed to provide versatility in formulation a wide range of personal care cleansing preparations. It may be used as the primary or as the secondary surfactant offering excellent hydrophobe compatibility without compromising foam integrity.

It has excellent compatibility with traditional anionic systems, such as lauryl and laureth sulphates and a variety of sulphonates, making it an ideal choice for secondary surfactant replacement, to improve foam characteristics of a system. Its hydrophobe compatibility allows the formulation of crystal clear micro-emulsions with emollient esters, and other natural polar oils, offering exception post-rinse sensory.

It is compatible with quaternary ammonium compounds and other cationics, and has great compatible with high electrolyte levels, while still maintain a crystal clear system.

Recommended usage level: 25 – 50%

## Esters

# Emulsifiers & Co-Emulsifiers O/W

## Babaçu oil

(INCI: Orbignya Oleifera Seed Oil)

Babaçu oil has emulsifying properties making it ideal for the preparation of O/W type emulsions. As an active ingredient, it can be used in skin and hair products for moisturisation. In soap it can be used to replace fats of animal and vegetable origin and as a raw material to obtain surfactants.

Babaçu almond is used in baby products in the form of liquid talc. When crushed, the seed produces a powder, known as babaçu powder, which absorbs moisture and helps protect the baby's skin, especially in the region of direct contact with the nappy.

Recommended usage level: 0.5 - 5% creams and lotions; 0.5 - 8% bar soaps and 0.1 - 1% in hair products

## Evicare® emulgiza rich

(INCI: Glyceryl Stearate Citrate, Cetearyl Alcohol, Glyceryl Behenate)

Evicare® emulgiza rich is a highly effective emulsifier blend for O/W-emulsions to create both low and high viscosities.

It is a combination of the well-known food grade emulsifier, Glyceryl Stearate Citrate (proven for many years to be safe and skin compatible) with two co-emulsifiers, Cetearyl Alcohol and Glyceryl Behenate in an easy-to-use pelletised blend, which is suitable to create a range of different formulation concepts.

Recommended usage level: 2.5 - 7%

## Evicare® emulgiza light

(INCI: Glyceryl Stearate Citrate, Cetearyl Alcohol, Glyceryl Laurate)

Evicare® emulgiza light is a versatile O/W emulsifier blend that has the ability to create a variety of textures.

It is 100% natural, COSMOS/ECOCERT and NaTrue approved.

Supplied in pellets for ease of handling this fast-emulsifying emulsifier also offers a preservative boosting effect.

Recommended usage level: 3.5 - 5.0%

## Evicare® GB

(INCI: Glyceryl Behenate)

Evicare® GB is a 100% natural O/W co-emulsifier and thickener. It imparts body and texture to emulsions by its crystallization in the emulsion and by forming a network between the oil droplets. It also lowers the surface tension between water and oil and therefore helps in the emulsification process like other long chain glyceryl monoesters. Due to its very long (C-22) carbon chain it is more effective and creates a different character in the cream. Evicare® GB can be added to the hot water phase as it requires melting to be activated. Mix it well prior to addition of the oil phase and homogenization.

Recommended usage level: 1 - 3%

## Evicare® GSC

(INCI: Glyceryl Stearate Citrate)

Evicare® GSC is a true evergreen in O/W-technology. This powerful, robust and 100% natural emulsifier gives reliable and stable emulsions under many conditions. It works with all kinds of emollients and other ingredients and even with surfactants. It is food grade and like all other palm-based products of our range RSPO MB. Used in natural and conventional skin care products such as, face care, baby care and sun care – there are virtually no limits for this easy to use O/W-emulsifier. It can be used on its own or combined with co-emulsifiers or texturizers.

Recommended usage level: 2.0 - 3.0%

## Evicare® PGS

(INCI: Polyglyceryl-3 Stearate)

A highly efficient emulsifier for oil-in-water (O/W) systems. It can be applied in any emulsion type, from soft to rich and with varying viscosities including sprays.

The product is composed of Polyglyceryl-3 Stearate, which has been used in cosmetics and food for many years. It is non-toxic and compatible with ingredients of any type or structure. The product is completely natural, manufactured from glycerin and stearic acid by esterification.

Evicare® PGS is COSMOS certified and conforms with other natural cosmetics certification labels.

Recommended usage level: 1 – 4 % depending on oil phase and presence of co-emulsifiers.

## Evicare® GSC pof

(INCI: Glyceryl Stearate Citrate)

Evicare® GSC palm free is a true evergreen in O/W-technology. This powerful, robust and 100% natural emulsifier gives reliable and stable emulsions under many conditions. It works with all kinds of emollients and other ingredients and even with surfactants. For people concerned about the sustainability of palm products we have this important

emulsifier in a palm free version, too. Evicare® GSC pof is used in natural and conventional skin care products. Skin care, face care, baby care or sun care – there are virtually no limits for this easy to use O/W-emulsifier. It can be used on its own or combined with co-emulsifiers or texturizers.

Recommended usage level: 2.0 - 3.0%

## Evicide® GML

(INCI: Glyceryl Laurate)

Evicide® GML has a number of exciting functions: It is a skin conditioner, surfactant thickener and also a co-emulsifier used for a quicker emulsifying process and for achieving a highly homogenous droplet dispersion in O/W emulsions. Evicide® GML is mostly known for its antimicrobial effect and preservative boosting capabilities in cosmetic formulations.

The short chain glyceryl monoesters show good efficacy against microorganisms. Within this group, Evicare® GMCY stands out in terms of efficacy but can sometimes compromise the emulsion stability. Evicide® GML is very interesting regarding its promoting effect for emulsion formation while having no issues of lowering viscosity or destabilising emulsions.

Recommended usage level: 0.5 - 2%

## Insapolive

(INCI: Olea Europae (olive) Oil)

Insapolive is a 100% vegetable emollient, composed of Olive Oil unsaponifiable, rich in sterols and squalene. It participates actively in hydrating and soothing skin, whilst also acting as a co-emulsifier.

Sterols and squalene are naturally present respectively in our alimentation (oils) and at the surface of our skin, and have an important action on the epidermis hydration.

Insapolive increases the expression of proteins involved in skin barrier function, whilst providing antioxidant benefits and improving the skin structure and elasticity. Ideal for sensitive, dry and mature skin.

Recommended usage level: 5 - 10%

## SCLEARGEL

(INCI: Sclerotium gum)

100% natural rheological gelling agent, resulting from the fermentation of the Sclerotium rolfii mushroom (GMO free). It is the perfect ingredient to formulate extremely transparent and clear aqueous gels. It can also be used as a co-emulsifier to stabilise emulsions.

Recommended usage level: 0.1-2%

## Emulsifiers W/O

### Evicare® PGPR

(INCI: Polyglyceryl-3 Polyricinoleate)

Evicare® PGPR is a very popular food grade W/O-emulsifier. This powerful, robust and 100% natural emulsifier provides reliable and stable emulsions with an extra caring effect. It works with all kinds of emollients and for people concerned about the sustainability of palm products:

Evicare® PGPR is based on Castor Oil. Evicare® PGPR provides a rich and caring skin feel making it ideal for use in protecting hand creams, night creams and water-proof formulations where a thicker consistency is desirable. It can be used on its own or combined with co-emulsifiers and waxes.

Recommended usage level: 2.0 - 3.0%

## Gelling Agents

### ESSACHEM® BW

(INCI: Behenyl Olivatate)

A natural based ester complex designed to offer thickening properties without compromising the spread of the formulation on the skin and hair. ESSACHEM® BW will thicken the oil phase of emulsions, lip applications and oil enriched cleansers to aid stabilisation whilst delivering an exceptional skin feel.

This natural complex will enhance the moisturisation properties and post rinse after feel from oil enriched body wash formulations without impacting the cleansing and foaming properties.

Recommended usage level: 2 - 8%

### Evicare® aquatex 80

(INCI: Xanthan Gum)

Evicare® aquatex 80 is a Cosmos certified, non-GMO, transparent and vegan gelling agent. Electrolyte tolerant it is compatible with up to 40% alcohol.

Fast solubility and excellent transparency. Highly compatible with surfactants and significantly reduced stringiness. Evicare® aquatex 14 offers a higher viscosity yield compared to Evicare® aquatex 80.

Recommended usage level: 0.1 – 1.0%

### Evicare® aquatex 14

(INCI: Xanthan Gum)

Evicare® aquatex 14 is a Cosmos certified, non-GMO, transparent and vegan gelling agent. Electrolyte tolerant it is compatible with up to 40% alcohol.

Incredibly fast solubility and excellent transparency due to its granulated form.

Evicare® aquatex 14 offers a higher viscosity yield compared to Evicare® aquatex 80.

Recommended usage level: 0.1 – 1.0%

### Evicare® lipotex

(INCI: Hydrogenated Vegetable Oil)

Evicare® lipotex is a 100% natural and non-palm derived oil thickener.

It can increase the viscosity of liquid oils and convert them in soft fluid paste or even totally solid textures. It works with most vegetable or ester oils and makes application of oil phases such as massage oils neat and clean. Solid butters easily produced with Evicare® lipotex softly melt on the skin with our body temperature.

It is palm oil free and derived from rapeseed.

Evicare® lipotex melts in oils at a temperature of approximately 60-70°C. Mix it thoroughly for a homogeneous distribution and let it cool down to yield a pasty to solid oil phase. The viscosity achieved depends on the concentration.

Recommended usage level: 5 - 15%

## GELLIN-K

(INCI: Glucomannan)

GELLIN-K is a gelling agent obtained by extracting polysaccharides from konjac's root. It provides colourless gels with high viscosity, leaving a protective film and fresh feeling on the skin. It can be used in either hot or cold processes and is the perfect natural alternative to synthetic polymers. Ideal to formulate shower gels, shampoos, slimming gels, gel scrub, freshness gel mask.

Recommended usage level: 0.1-1.5%

## Peruvian Tara Seed

(INCI: Caesalpinia Spinosa Gum)

Tara Gum is a 100% natural gelling agent obtained by mechanical process from the Tara Tree Seed native to the Peruvian Andes. This bio-nutrient has been used by the Peruvian Incas for the past millennia to treat irritated skin as well as many other diverse uses.

Not only does it help improve skin condition it also provides moisturisation due to it containing various polysaccharide groups. In formulations, Tara gum can be used to form stable gels, as a viscosity controlling agent, to create smooth non-sticky, non-tacky and non-stringy gels as well as providing stability to emulsions. Stable over a wide pH range and 100% natural.

Recommended usage level: 0.5 - 1.0%

## SCLEARGEL

(INCI: Sclerotium gum)

100% natural rheological gelling agent, resulting from the fermentation of the Sclerotium rolfii mushroom (GMO free). It is the perfect ingredient to formulate extremely transparent and clear aqueous gels. It can also be used as a co-emulsifier to stabilise emulsions.

Recommended usage level: 0.1-2%

# Contact Us

Interested?

Then contact the Infinity team  
for more information:

T: 01344 354 900

E: [technical@infinity-ingredients.co.uk](mailto:technical@infinity-ingredients.co.uk)

W: [infinity-ingredients.co.uk](http://infinity-ingredients.co.uk)