



# Olivatis<sup>®</sup> 18

INCI NAME	Olive Oil Polyglyceryl-6 Esters, Sodium Stearoyl Lactylate, Cetearyl Alcohol
CAS N.	85711-62-2, 25383-99, 67762-27-0

**Olivatis<sup>®</sup> 18** is an ultra-mild, moderately anionic, PEG-free, liquid crystals promoting, **O/W emulsifier**, derived entirely from natural raw materials:

Polyglycerine from vegetal glycerine
Olive fatty acids
Lactic acid
Cetearyl alcohol and stearic acid of vegetal origin

**Olivatis<sup>®</sup> 18** is approved by COSMOS as a natural ingredient.



**Olivatis<sup>®</sup> 18** is a unique selection of ingredients with a composition similar to the natural lipid layer of skin. The combination of an emulsifier derived from olive oil, that is rich in fatty acids similar to those of human sebum, and of a derivative of lactic acid, an essential component of the NMF, makes **Olivatis<sup>®</sup> 18** a superior emulsifier with skin moisturizing and protecting properties.

Once dispersed in water, **Olivatis<sup>®</sup> 18** forms a jelly dispersion with a pH between 5 and 6 like human skin's.



## PHYSICAL / CHEMICAL PROPERTIES

<b>Appearance:</b>	waxy flakes
<b>Color:</b>	ivory
<b>Melting range:</b>	50° - 60° C
<b>Acid value:</b>	10 - 25
<b>Saponification value:</b>	85 - 115
<b>Water:</b>	2% max.
<b>pH (5% water dispersion):</b>	5,0 - 7,5
<b>HLB:</b>	11 about

## FEATURES AND PERFORMANCES OF OLIVATIS® 18 AT A GLANCE

Ready to use.
Stable emulsions.
Broad pH range (4,5 – 8,0).
Very low irritation potential.
Wide range of applications from butters to hair and skin lotions.
Light and silky feel.
Long lasting emollient / moisturizing effect.
No consistency agent required.
Excellent spreadability.
Low processing temperature (55°C).
Global regulatory compliance.



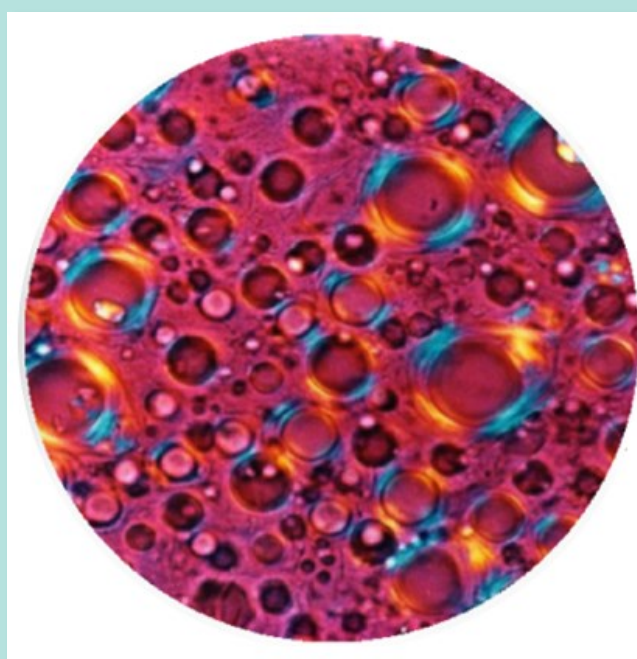
## LIQUID CRYSTAL PROPERTIES

**Olivatis® 18** creates systems organized in liquid crystal lamellar phases, without the addition of other ethoxylated co-emulsifiers and regardless of the chemical structure and polarity of the substances in the internal phase of emulsions.

**Olivatis® 18** generates liquid crystalline lamellar phases around the oil droplets that, protected by a double stratum of amphiphilic molecules, concentrated in the O/W interface, guarantee the stability of the system. At least 3 surrounding layers of amphiphilic substances are required to form a liquid crystal.

Thanks to the liquid crystal structure, emulsions with **Olivatis® 18** have the same self-organizing pattern of the lipids of the natural stratum corneum. The inter-cellular lipids of the stratum corneum contribute to the maintenance of a healthy skin: by hydration, cell adhesion and reduction of transepidermal water loss. All these functions are provided by the self-organizing properties of the lipids in **Olivatis® 18** emulsions, showing a high affinity to skin and restoring the natural hydro-lipidic film that protects from trans-epidermal water loss, with a superior moisturizing effect.

Furthermore, the great quantity of water trapped in the lamellar structures is immediately available when the cream is applied on skin. For this reason, emulsions have a shiny surface, a fresh and light feel and leave a light sensation on skin.



A simple emulsion made with 5% **Olivatis® 18**, observed by an optical microscope at 250 magnifications with polarized light, shows the typical birefringence around micelles of the liquid crystals.



## EMULSIFYING POWER

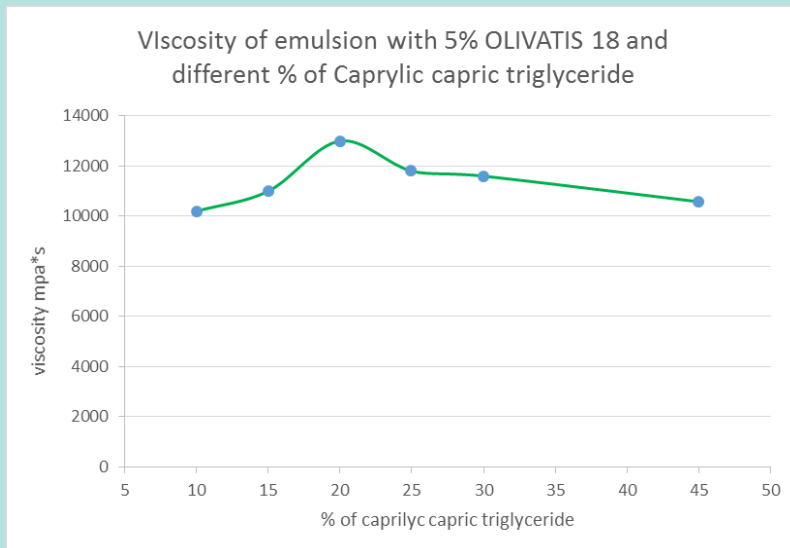
**Olivatis® 18** can be used at 3,0 – 6,5% concentrations, depending on the amount of oils and up to 50% of oils can be emulsified.

Emulsions with **Olivatis® 18** have an excellent skin feel, are easily spreadable, not oily and leave a fresh sensation on skin.

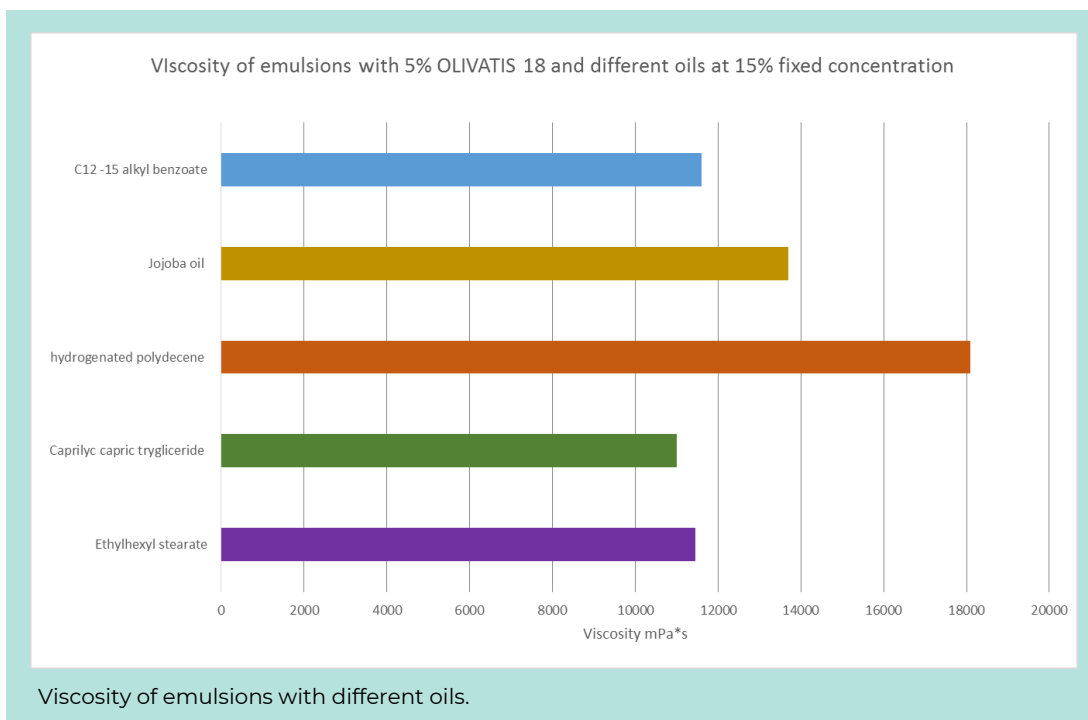
**Olivatis® 18** has excellent thickening properties, very slightly affected by different concentrations of oil.

The emulsifying power of **Olivatis® 18** is not influenced by the presence of glycols, glycerin, alcohols, mineral & organic sunscreens, pigments, whitening agents, alpha hydroxyl acids.

**Olivatis® 18** is effective with oils of different nature and polarity and is therefore quite compatible with all popular oils used in cosmetics.



Viscosity trend with growing concentrations of oil.



Viscosity of emulsions with different oils.



## APPLICATIONS

### SKIN CARE

**Olivatis® 18** has an excellent skin compatibility. Thanks to its minimal impact on the natural lipids of skin, it is an outstanding emulsifier for skin care emulsions for dry and sensitive skin. **Olivatis® 18** maintains the natural defenses of skin against moisture loss and external irritants.

**Olivatis® 18** can be used in all skin care emulsions as a stand-alone emulsifiers and with other surface-active ingredients.

### SUN CARE

**Olivatis® 18** is an excellent emulsifier for sun care formulations. It is compatible with physical and chemical UV-filters. It is also suitable in high Titanium Dioxide formulations where agglomeration can be an issue.

### COLOUR COSMETICS

**Olivatis® 18** as standalone emulsifier can be used in foundations and other color cosmetics emulsions such as high-lighters and make-up primers. It is particularly suitable for formulations for dry and sensitive skin when a high moisture retention and a low skin irritation potential are essential.

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