## **OLIVATIS® 18**

Olivatis 18 is an ultra-mild, moderately anionic, PEG-free, liquid crystals promoting, O/W emulsifier, derived entirely from natural raw materials. Olivatis is a unique selection of ingredients with a composition like the natural lipid layer of skin. The combination of an emulsifier derived from olive oil, that is rich in fatty acids like those of human sebum, and of a derivative of lactic acid, an essential component of the NMF, makes a superior emulsifier with skin moisturizing and protecting properties. Once dispersed in water, forms a jelly dispersion with a pH between 5 and 6 like human skin's.

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 three surrounding layers of amphiphilic substances are required to form a liquid crystal. Thanks to the liquid crystal structure, emulsions with have the same self-organizing pattern of the lipids of the natural stratum corneum.

The intercellular 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 hydrolipidic film. 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 light feel, leave a fresh sensation on skin and are easily spreadable.



A simple emulsion made with 5% Olivatis® 18, observed by an optical microscope at 400 magnifications, shows the typical birefringence around micelles of the liquid crystals. (picture taken by Medolla Speciality Chemicals , all rights reserved.)

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. Olivatis® 18 has excellent thickening properties, very slightly affected by different concentrations of oil. The emulsifying power of is not influenced by the presence of glycols, glycerin, alcohols, mineral & organic sunscreens, pigments, whitening agents, alpha hydroxyl acids. The Emulsifier is effective with oils of different nature and polarity and is therefore quite compatible with all popular oils used in cosmetics. This cosmos approved emulsifier are suitable for low processing temperature.

Olivatis<sup>®</sup> 18 is an excellent emulsifier for sun care formulations and recommend for high Titanium Dioxide and Zinc Oxid formulations where agglomeration can be an issue. Furthermore, Olivatis<sup>®</sup> 18 can also be used in colour cosmetics as a stand-alone emulsifier in foundations and other colour cosmetic emulsions such as highlighters and make-up primers.

