

# Esaflo<sup>®</sup> HM 22

## Your distinctive emulsification-aid

The growing consumer appetite for green and natural based cosmetic products provides new challenges for formulators.

ESAFLOR<sup>®</sup> HM 22 is a unique hydrophobically modified bio-based polymer that can be incorporated into a wide range of personal care applications in need of emulsifying or stabilizing, delivering innovative character to the formulation design, even at low concentrations.

The backbone of ESAFLOR<sup>®</sup> HM 22 is the guar gum, a renewable and sustainable polysaccharide extracted from the *Cyamopsis Tetragonoloba* plant.

ESAFLOR<sup>®</sup> HM 22 enables formulators to achieve a variety of textures, from milks and lotions up to thick creams, and can provide an attractive design in combination with the most commonly used emulsifiers.

In translucent water-based solution, ESAFLOR<sup>®</sup> HM 22 not only performs an excellent thickener but also increases the yield point of the system, providing the dual benefit of a stabilizer and suspending agent.

Beyond its functionality, due to its polymeric structure, this guar derivative conveys pleasing texture and tactile sensations, leaving a soft silk feeling after application.

**INCI name:** C18-C22 Hydroxyalkyl Hydroxypropyl Guar

### Summary of benefits

- Emulsification-aid and stabilizer
- Excellent thickener
- Suspending agent
- Stable over wide pH range
- Superior electrolytes tolerance
- Bio-based: natural origin and sustainable source

### Applications

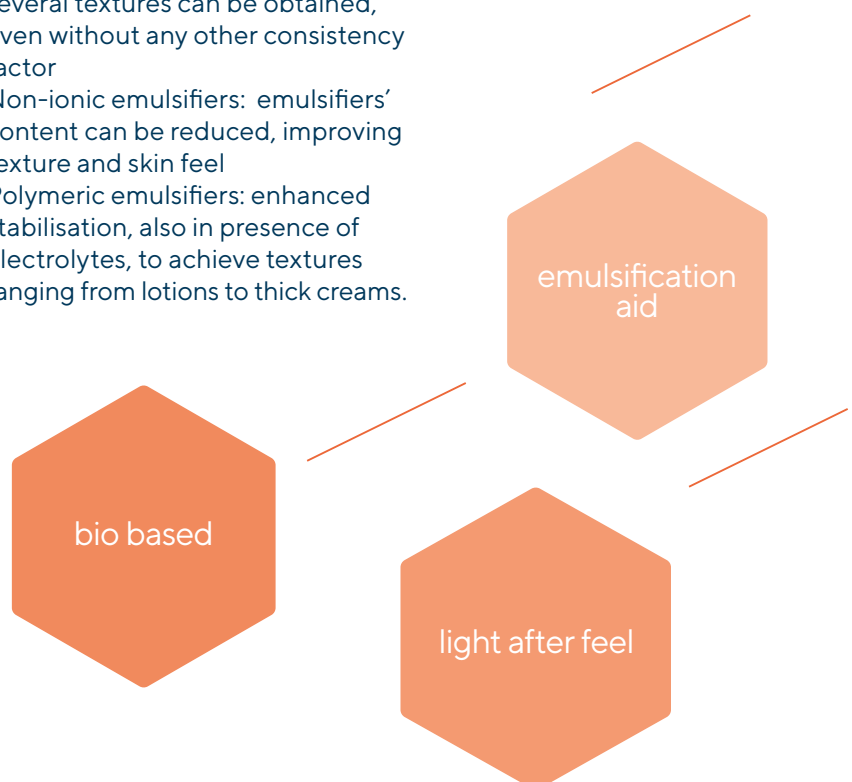
ESAFLOR<sup>®</sup> HM 22 is an excellent emulsification-aid for O/W emulsions. It works in combination with the most common emulsifiers to create distinctive textures for skin care and hair care treatments.

- Liquid crystal emulsions: enhanced stabilisation, lighter and less oily texture compared to Xanthan Gum
- Polyglycerol-based emulsifiers: several textures can be obtained, even without any other consistency factor
- Non-ionic emulsifiers: emulsifiers' content can be reduced, improving texture and skin feel
- Polymeric emulsifiers: enhanced stabilisation, also in presence of electrolytes, to achieve textures ranging from lotions to thick creams.

### Formulation tips

ESAFLOR<sup>®</sup> HM 22 is easy to use. It is water-dispersible and viscosity develops when pH is adjusted to 5-6; 30 minutes' stirring time is recommended for full hydration. For emulsions, ESAFLOR<sup>®</sup> HM 22 should be added to the aqueous phase. ESAFLOR<sup>®</sup> HM 22 is tolerant to high concentrations of electrolytes and helps in stabilizing emulsions that include them.

Typical use levels are 0.1 - 0.5%.



## RESTORING MASK - LAMCOS 189

Phase	Ingredient name	% w/w
<b>A</b>		
1	Aqua (Water)	To 100
2	Glycerin	3.0
3	Trisodium Ethylenediamine Disuccinate	0.1
4	<b>ESAFLOR® HM 22</b>	0.3
5	Citric acid	To pH 5.5
<b>B</b>		
1	Sodium Stearoyl Lactylate	1.0
2	Polyglyceryl-3 Dicitrate/Stearate	2.5
3	Cetearyl Alcohol	3.0
4	Dicaprylyl Carbonate	5.0
5	Coco-caprylate	5.0
6	Caprylic/Capric Triglyceride	5.0
<b>C</b>		
1	Phenoxyethanol, Ethylhexylglycerin	1.0
<b>D</b>		
1	Citric acid	To pH 5-6

### Manufacturing procedure:

Premix ingredients A1-3 in the main vessel. Add A4 under vigorous stirring. Adjust pH to ~5.5 and keep stirring for ~20' to ensure the complete hydration of the polymer. In a support vessel, add ingredients of phase B. Heat phases A and B up to 70-75°C, then homogenise phase B into phase A with a Silverson L5T at 4500 RPM, until a smooth emulsion is obtained. Cool down to room temperature with gentle stirring. Add C1, then adjust pH with D1.

### General characteristics:

Appearance: thick off-white emulsion  
pH: 5-6  
Viscosity (Brookfield RVT, T-bar spindle + Helipath, 5 rpm, 25°C, 30''): ~75000cPs

## SOOTHING CREAM - LAMCOS 190

Phase	Ingredient name	% w/w
<b>A</b>		
1	Aqua (Water)	To 100
2	Glycerin	3.0
3	Trisodium Ethylenediamine Disuccinate	0.1
4	<b>ESAFLOR® HM 22</b>	0.3
5	Citric acid	To pH 5.5
<b>B</b>		
1	Cetearyl Alcohol, Cetearyl Glucoside	4.0
2	Dicaprylyl Carbonate	5.0
3	Coco-caprylate	5.0
4	Caprylic/Capric Triglyceride	5.0
<b>C</b>		
1	Phenoxyethanol, Ethylhexylglycerin	1.0
<b>D</b>		
1	Citric acid	To pH 5-6

### Manufacturing procedure:

Premix ingredients A1-3 in the main vessel. Add A4 under vigorous stirring. Adjust pH to ~5.5 and keep stirring for ~20' to ensure the complete hydration of the polymer. In a support vessel, add ingredients of phase B. Heat phases A and B up to 70-75°C, then homogenise phase B into phase A with a Silverson L5T at 4500 RPM, until a smooth emulsion is obtained. Cool down to room temperature with gentle stirring. Add C1, then adjust pH with D1.

### General Characteristics:

Appearance: thick off-white emulsion  
pH: 5-6  
Viscosity (Brookfield RVT, T-bar spindle + Helipath, 5 rpm, 25°C, 30''): ~20000cPs

## NOURISHING BODY CREAM - LAMCOS 191

Phase	Ingredient name	% w/w
<b>A</b>		
1	Aqua (Water)	To 100
2	Glycerin	2.0
3	Trisodium Ethylenediamine Disuccinate	0.1
4	<b>ESAFLOR® HM 22</b>	0.3
5	Citric acid	To pH 5.5
<b>B</b>		
1	Dicaprylyl Carbonate	5.0
2	Coco-caprylate	5.0
3	Caprylic/Capric Triglyceride	5.0
4	<b>VISCOLAM® AT 100 P</b>	4.0
<b>C</b>		
1	Phenoxyethanol, Ethylhexylglycerin	1.0
<b>D</b>		
1	Citric acid	To pH 5-6

### Manufacturing procedure:

Premix ingredients A1-3 in the main vessel. Add A4 under vigorous stirring. Adjust pH to ~5.5 and keep stirring for ~20' to ensure the complete hydration of the polymer. In a support vessel, add ingredients of phase B. Homogenise phase B into phase A with a Silverson L5T at 4500 RPM, until a smooth emulsion is obtained. Add C1, then adjust pH with D1.

### General Characteristics:

Appearance: thick off-white emulsion  
pH: 5-6  
Viscosity (Brookfield RVT, T-bar spindle + Helipath, 5 rpm, 25°C, 30''): ~45000cPs

For more information please contact:

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