



Natura-Tec Ecomuls 2 in 1 - Water in Oil

INCI : Glyceril Oleate (and) Polyglyceryl-3-polycricinoleate (and) Olea Europaea (Olive) Oil Unsaponifiables

Characteristics:

- HLB : 3 ± 1
- Liquid form (25°C)
- 2 in 1: Intensive emulsifier & moisturiser
- Soluble in oil phase
- Cold and hot process
- PEG free
- Efficient from 3 % without co-emulsifying system
- Fluid to consistent viscosity emulsions
- Rich application with light after skin feel

Process in Formulation/ Cold Process (no waxes in the oil phase) :

Salt (MgSO₄·7H₂O or NaCl) is added to the water phase at room temperature (25 °C).

Natura-Tec Ecomuls 2 in 1 is added to the oil phase at room temperature.

Add the water phase **slowly** (while stirring at high speed using a standard propeller stirrer) to the oil phase at room temperature.

Once emulsion obtained, shear with a rotor stator system (Ultra turrax, Silverson etc) to finalize the emulsion.

Main parameters controlling stable emulsifying performance (cold process):

- Addition of a salt in the water phase: MgSO₄·7H₂O (0,8 %) or NaCl (2%)
- % of the emulsifier – from 3 % to 5 %
- Composition of the oil phase : excellent affinity with vegetable emollients (vegetable oils, etc)
- % of the oil phase recommended: 15 % (higher final viscosity) to 25 % (lower final viscosity)
- Sensitive to electrolytes (a hot process is recommended in this case).
- Homogenization at the end of the process.

Process in Formulation/ Hot Process :

Salt is added to the aqueous phase at room temperature.

Natura-Tec Ecomuls 2 in 1 is added to the oil phase at room temperature.

Heat separately the two phases up to 70°C.

At temperature, add the water phase **slowly** to the oil phase while stirring at high speed using a standard propeller stirrer.

Once emulsion obtained, shear with a rotor stator system (Ultra turrax, Silverson, etc) to finalize the emulsion.

Cool at room temperature under slow agitation.

Add the sensitive phase (actives, perfume, preservatives, etc) below 40°C.

Homogenize at the end of the process.

Main parameters controlling stable emulsifying performance (hot process):

- Addition of a salt in the water phase : MgSO₄·7H₂O (0,8 %) or NaCl (2%)
- % of the emulsifier – from 3 % to 5 %
- Composition of the oil phase : excellent affinity with vegetable emollients (vegetable oils, etc)
- % of the oil phase recommended: 15 % to 35 %
- Homogenization at the end of the process.

Sensorial Profile

Emulsions obtained with **Natura-Tec Ecomuls 2 in 1** present unique **sensorial benefits:**

- Rich application
- Good spreadability for a water in oil emulsifier
- Medium absorption
- Leaves a light, smooth and pleasant thin film on the skin