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Cosmetic composition for coating keratin fibres

The present invention relates to a cosmetic composition for coating keratin fibres, and in particular the eyelashes or the eyebrows. In particular, said cosmetic composition is a composition for making up and optionally caring for the eyelashes. The present invention also relates to a process for coating keratin fibres, in particular a process for making up and optionally caring for the eyelashes.

The composition used may in particular be in the form of an eyelash product such as a mascara, or an eyebrow product. More preferentially, the invention relates to a mascara. The term "mascara" is intended to mean a composition intended to be applied to the eyelashes: it may be an eyelash makeup composition, an eyelash makeup base (also known as a base coat), a composition to be applied over a mascara, also known as a top coat, or else a cosmetic composition for treating the eyelashes. The mascara is more particularly intended for human eyelashes, but also false eyelashes.

Mascaras are in particular prepared according to two types of formulation: water-based mascaras known as cream mascaras, in the form of a dispersion of waxes in water; anhydrous mascaras or mascaras with a low water content, known as waterproof mascaras, in the form of dispersions of waxes in organic solvents. The present patent application more specifically relates to water-based mascaras.

Keratin fibre coating compositions of such a mascara type generally consist of at least one fatty phase generally formed from one or more waxes dispersed in an aqueous liquid phase by means of an emulsifying system or conveyed in an organic solvent.

The aim of applying mascara is in particular to increase the intensity of the gaze. Numerous thickening or volumizing mascaras exist to do this, the principle of which consists in depositing a maximum amount of material onto the eyelashes so as to obtain this volumizing (or charging) effect. It is in particular by means of the amount of solid particles and in particular of waxes that the desired application specificities for compositions may be adjusted, for instance their fluidity or consistency, and also their thickening power (also known as the charging or makeup power). These solid particles
and in particular waxes are dispersed in the cream mascara by means of an emulsifying system composed of one or more surfactant(s).

However, conventional makeup architectures contain waxes in the crystalline state, i.e. after hot emulsion, the waxes conventionally used crystallize in the form of large opaque crystals during cooling, conferring an opaque and thickening nature on the depigmented base of the formula. The colours are then less intense than in a transparent base.

One aim of the present invention is thus to obtain a composition for coating keratin fibres, preferably a mascara, which has a good black intensity, from a colorimetry and chromaticity point of view.

In addition, a particular problem encountered with certain surfactants, in particular ionic surfactants, is that they are generally unstable at low temperature (4°C), said surfactants crystallizing and thus destabilizing the emulsion, giving rise to aggregates of materials (waxes in particular) on the eyelashes.

One aim of the present application is more particularly to provide a stable mascara which has a texture that is sufficiently thick to obtain a charging deposit, of satisfactory consistency, allowing easy application to the eyelashes and/or an even deposit, i.e. which is smooth and uniform, even after two months store at 4°C.

One aim of the present application is also to provide a stable mascara which has a texture that is sufficiently thick to obtain a charging deposit, of satisfactory consistency, allowing easy application to the eyelashes and an even deposit, i.e. which is smooth and uniform, even after two months store at 45°C.

One aim of the present application is more particularly to provide a stable mascara which has a texture that is sufficiently thick to obtain a charging deposit, of satisfactory consistency, allowing easy application to the eyelashes and an even deposit, i.e. which is smooth and uniform, even after two months store at temperatures oscillating between 4°C and 45°C.
One aim of the present application is more particularly to provide a mascara
in which the waxes are uniformly dispersed, being in the presence of a single population.

One aim of the present application is more particularly to provide a mascara
in which the pigments are uniformly dispersed.

Consequently, a subject of the present invention, aiming to solve at least one
of the abovementioned problems, is a cosmetic composition for coating keratin fibres,
preferably the eyelashes, preferably a mascara composition, of the emulsion type,
preferably wax(es) in water, comprising:
- an aqueous phase,
- at least one (poly)oxyalkylenated wax, preferably comprising from 2 to 100
oxyalkylene groups, more preferentially from 3 to 75 oxyalkylene groups, more
preferentially from 4 to 50 oxyalkylene groups, more preferentially from 5 to 25
oxyalkylene groups, more preferentially from 6 to 20 oxyalkylene groups, more
preferentially from 7 to 12 oxyalkylene groups, even more preferentially from 8 to 10
oxyalkylene groups,
- an emulsifying system capable of dispersing the (poly)oxyalkylenated wax(es),
comprising:
  i) at least one non-ionic surfactant with an HLB value greater than or equal
to 8 at 25°C, the non-ionic surfactant(s) with an HLB value greater than or equal to 8 at
25°C preferably being chosen from (poly)oxyalkylenated surfactants preferably
comprising from 10 to 200 oxyalkylene groups, and more preferentially from
(poly)oxyalkylenated surfactants comprising at least one oxyethylene group \((\text{CH}_2\text{CH}_2\text{O})_n\)
or \((\text{OCH}_2\text{CH}_2)_n\) in which \(n\) is greater than or equal to 15, preferably inclusively between
20 and 200,
  ii) at least one surfactant of alkylpolyglycoside type, in particular at least one
surfactant of alkylpolyglucoside type, with a \(\text{C}_{12-22}\) alkyl chain,
said (poly)oxyalkylenated wax(es) comprising a polyethylene glycol wax comprising at
least one oxyethylene group \((\text{CH}_2\text{CH}_2\text{O})_n\) or \((\text{OCH}_2\text{CH}_2)_n\) in which \(n\) is greater than or
equal to 2.

Preferably, the polyoxyalkylenated wax(es) comprise(s) a plurality of
successive oxyalkylene groups, or units, in particular a plurality of successive
oxyethylene groups or units, for example greater than or equal to 2, and in particular between 2 and 100.

Preferentially, the polyoxyalkylenated wax is a polyethylene glycol wax inclusively comprising from 2 to 100 ethylene glycol units, more preferentially from 3 to 75 oxyethylene groups, more preferentially from 4 to 50 oxyethylene groups, more preferentially from 5 to 25 oxyethylene groups, more preferentially from 6 to 20 oxyethylene groups, more preferentially from 7 to 12 oxyethylene groups, even more preferentially from 8 to 10 oxyethylene groups.

In other words, the (poly)oxyalkylenated wax(es) advantageously comprise a polyethylene glycol wax comprising at least one oxyethylene group \((\text{CH}_2\text{CH}_2\text{O})_n\) or \((\text{OCH}_2\text{CH}_2)_n\) in which \(n\) is greater than or equal to 2, in particular ranging from 2 to 100, more preferentially from 3 to 75, more preferentially from 4 to 50, more preferentially from 5 to 25, more preferentially from 6 to 20, more preferentially from 7 to 12, even more preferentially from 8 to 10.

The (poly)oxyalkylenated wax(es) is (are) distinct from (poly)hydroxyalkylenated wax(es). In particular, the (poly)oxyalkylented wax(es) is (are) distinct from (poly)oxyalkylenated glycerol ethers.

Surprisingly and unexpectedly, the inventors of the present application have solved this (these) problem(s) by means of such a composition. In particular, a composition in accordance with the invention gives rise to a composition which has a very good colour intensity, in particular black intensity. In addition, such a composition is stable, with a uniform and even wax dispersion, even after 2 months, whether at 45°C or 4°C. It appears that such a composition also exhibits good pigment dispersion.

Such a composition is still pleasant upon application.

The inventors explain the result obtained by putting forward the hypothesis that the wax(es) is (are) hot-emulsified in the aqueous phase in very fine particles by virtue of the pair of surfactants in accordance with the invention, and this (these) wax(es) crystallize(s) upon cooling in the form of particles of nanometric sizes, conferring, on a composition, in its most reduced expression form, essentially consisting of water, of wax(es) according to the invention and of the combination of surfactants according to the invention, an opalescent nature.

Such particles can be characterized by an average particle size. Such
particles are generally isotropic, in particular approximately spherically or perfectly spherically shaped.

A particle size can be measured by various techniques. Mention may in particular be made of the (dynamic and static) light scattering techniques, Coulter capture methods, measures of sedimentation rates (related to the size via Stokes law) and microscopy. These techniques make it possible to measure a particle diameter and some make it possible to measure a particle size distribution.

Preferably, the particle sizes and size distributions of the compositions according to the invention are measured by static light scattering using a commercial particle size analyser such as the MasterSizer 2000 from Malvern. The data are processed on the basis of the Mie scattering theory. This theory, which is exact for isotropic particles, makes it possible to determine, in the case of non-spherical particles, an "effective" particle diameter. This theory is in particular described in the publication by Van de Hulst, H.C., "Light Scattering by Small Particles", Chapters 9 and 10, Wiley, New York, 1957.

The "average particle size" is expressed as volume average "effective" diameter $D_{[4,3]}$, defined in the following way:

$$D_{[4,3]} = \frac{\sum_i V_i \cdot d_i}{\sum_i V_i}$$

where $V_i$ represents the volume of the particles of effective diameter $d_i$. This parameter is in particular described in the technical documentation of the particle size analyser.

The measurements are carried out at 25°C, on a diluted dispersion of particles. The "effective" diameter is obtained by taking a refractive index of 1.33 for water and an average refractive index of 1.45 for the particles.

In the case in point, the inventors have observed that, for said composition consisting essentially of water, of wax(es) according to the invention and of the combination of surfactants according to the invention, the particles of wax(es) have an average size, expressed as volume average "effective" diameter $d(0.5)$, of less than or equal to 1 $\mu\eta$, in particular strictly less than 1 $\mu\eta$, more preferentially than 0.5 $\mu\eta$, and even more preferentially less than or equal to 0.25 $\mu\eta$, such as between 0.01 and 0.15 $\mu\eta$. The $d(0.9)$ value shows, in addition, that 90% of them have a size of less than 0.25 $\mu\eta$. 
This average particle size is advantageous in terms of the use of the composition compared with compositions comprising wax particles of larger sizes, which result, for the same percentage of wax, in a mascara that is difficult or even impossible to formulate, granular and too thick, which cannot be applied (too compact and does not crumble), which is uncomfortable, which exhibits poor pigment and filler dispersion, and which has a matte colour.

It is understood that the surfactants will have a tendency to be positioned at the interface of the aqueous phase and of the wax particles in order to stabilize them. The particle sizes measured are thus measured in the presence of the surfactants, since they are difficult to dissociate from the particles. The sizes measured and given take this particularity into account.

The term "opalescent compositions" is intended to mean compositions as described above which allow light to pass through without causing, or while barely causing, any deviation by refraction or reflection. The transparency of the composition can be measured using a turbidimeter. The Model 2100® turbidimeter from the company Hach can, for example, be used for the measurements of the turbidity ranges of the composition. The composition is considered to be transparent when the turbidity value measured is between 0 and 250 NTU, and it is considered to be translucent for a turbidity value ranging from 250 to 1000 NTU.

This advantageously observed particle size and this opalescent nature could explain in particular the colour development observed when one or more pigment(s) is (are) added to said composition.

According to a second aspect, a subject of the present invention is also an assembly or kit for coating keratin fibres, comprising:
- at least one cosmetic composition for coating keratin fibres as described previously, and
- at least one applicator for the composition, said applicator comprising means, where appropriate with reliefs, configured to come into contact with said keratin fibres, such as the eyelashes or the eyebrows, so as to smooth and/or separate the eyelashes or the eyebrows. Such reliefs may comprise teeth, bristles or the like. Said assembly, and in particular said applicator, may optionally be equipped with means for vibrating and/or heating said composition.

According to a third aspect, a subject of the present invention is also an
assembly or kit for packaging and applying a composition for coating keratin fibres, comprising:
- a device for packaging said cosmetic composition for coating keratin fibres as described previously,
- an applicator for said composition.
Said applicator may be integrally attached to a gripping member forming a cap for said packaging device. In other words, said applicator may be mounted in a removable position on said device between a closed position and an open position of a dispensing aperture of the device for packaging said composition.

According to a fourth aspect, a subject of the present invention is also a process for coating keratin fibres, and in particular for making up the eyelashes or eyebrows, comprising a step of applying a cosmetic composition for coating keratin fibres as described previously.

According to preferred particular embodiments of the present invention, considered alone or in combination, corresponding to at least one of the abovementioned technical problems:
- the emulsion is of the wax(es)-in-water type;
- said composition comprises a fatty phase dispersed in the aqueous phase;
- the aqueous phase, in particular the water, represents from 30% to 80% by weight and preferably from 40% to 70% by weight relative to the total weight of the composition;
- said composition is free of oil or organic solvent;
- the fatty phase predominantly comprises, preferentially essentially consists of, wax(es), preferably essentially consists of (poly)oxyalkylenated wax(es);
  - the (poly)oxyalkylenated wax(es) comprise(s) a polyethylene glycol wax comprising at least one oxyethylene group \((\text{CH}_2\text{CH}_2\text{O})_n\) or \((\text{OCH}_2\text{CH}_2)_n\) in which \(n\) is greater than or equal to 2;
- said composition comprises at least 50% by weight of (poly)oxyalkylenated wax(es), preferably at least 75% by weight of (poly)oxyalkylenated wax(es), more preferentially at least 90% by weight of (poly)oxyalkylenated wax(es), even more preferentially 95% by weight of (poly)oxyalkylenated wax(es) and better still 100% by weight of (poly)oxyalkylenated wax(es), relative to the total weight of wax(es);
- the fatty phase comprises at least 50% by weight of (poly)oxyalkylenated wax(es), better still at least 75% by weight of (poly)oxyalkylenated wax(es), more preferentially at least 90% by weight of (poly)oxyalkylenated wax(es), even more preferentially 95% by weight of (poly)oxyalkylenated wax(es) and better still 100% by weight of (poly)oxyalkylenated wax(es), relative to the total weight of the fatty phase;

- the total content of (poly)oxyalkylenated wax(es) is greater than or equal to 10% by weight, relative to the total weight of the composition, better still between 12% and 40% by weight, preferably between 15% and 38% by weight, more preferentially between 20% and 35% by weight, relative to the total weight of the composition;

- the (poly)oxyalkylenated wax(es) is (are) chosen from a (poly)oxyalkylenated beeswax, a (poly)oxyalkylenated siliconyl beeswax, a (poly)oxyalkylenated carnauba wax, a (poly)oxyalkylenated candelilla wax, a (poly)oxyalkylenated siliconyl candelilla wax, a (poly)oxyalkylenated lanolin wax, and mixture(s) thereof;

- the (poly)oxyalkylenated wax(es) is (are) chosen from a (poly)oxyalkylenated wax chosen from a (poly)oxyethylenated beeswax, a (poly)oxyethylenated siliconyl beeswax, a (poly)oxyethylenated carnauba wax, a (poly)oxyethylenated candelilla wax, a (poly)oxyethylenated siliconyl candelilla wax, a (poly)oxyethylenated lanolin wax, and mixture(s) thereof;

- the (poly)oxyalkylenated wax(es) is (are) chosen from waxes having the following INCI name: Bis-PEG-12 Dimethicone Candellilate wax, Bis-PEG-12 Dimethicone Beeswax, Dimethicone PEG-8 Beeswax, PEG-6 Beeswax, PEG-8 Beeswax, PEG-12 Beeswax, PEG-20 Beeswax, PEG-2 Sorbitan Beeswax, PEG-6 Sorbitan Beeswax, PEG-8 Sorbitan Beeswax, PEG-20 Sorbitan Beeswax, PEG-12 Carnauba Wax, PEG-75 Lanolin Wax, and mixture(s) thereof, preferably from;

- the total content of (poly)oxyalkylenated wax(es) is greater than or equal to 5% by weight, even better still greater than or equal to 10% by weight, relative to the total weight of the composition, preferably between 12% and 40% by weight, more preferentially between 15% and 35% by weight, even better still between 20% and 30% by weight, relative to the total weight of the composition;

- the non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C is (are) present in a total content of greater than or equal to 1% by weight relative to the total weight of the composition, preferably between 1.5% and 8% by weight more preferably between 2% and 5% by weight relative to the total weight of the composition;
- the non-ionic surfactant(s) with an HLB value greater than or equal to 8, preferably greater than or equal to 10, is (are) chosen from:
  - (poly)oxygenalkylated glycerol ethers,
  - (poly)oxygenalkylated alcohols,
  - (poly)oxygenalkylated esters of a fatty acid and of polyethylene glycol,
  - esters of a fatty acid and of (poly)oxygenalkylated glycerol ethers,
  - esters of a fatty acid and of (poly)oxygenalkylated sorbitol ethers, and mixture(s) thereof; preferably from (poly)oxygenalkylated glycerol ethers,
esters of a fatty acid and of (poly)oxygenalkylated glycerol ethers, and a mixture thereof, preferably comprising from 20 to 200 oxyethylene groups;
- the non-ionic surfactant(s) with an HLB value greater than or equal to 8, preferably greater than or equal to 10, is (are) chosen from (poly)oxygenalkylated glycerol ethers, esters of a fatty acid, in particular a C₈-C₄₄ and preferably C₁₆-C₂₂ fatty acid, and of (poly)oxygenalkylated glycerol ethers, which are in particular oxyethylenated, preferably comprising from 20 to 200 oxyethylene groups, in particular chosen from polyoxyethylenated glyceryl stearate comprising 30 oxyethylene groups and polyoxyethylenated glyceryl isostearate comprising 30 oxyethylene groups;
- the alkylpolyglycoside(s) is (are) one (of the) compound(s) of formula:
\[
R(0)(G) \_x \n\]
in which formula:
  - the alkyl radical R is a linear or branched, preferably linear, and saturated or unsaturated, preferably saturated, C₁₂-C₂₂, preferably C₁₆-C₂₀, hydrocarbon-based chain,
  - G is a saccharide residue, or reduced sugar, and x ranges from 1 to 5, preferably from 1.05 to 2.5 and more preferably from 1.1 to 2, the saccharide residue preferably being chosen from glucose, dextrose, sucrose, fructose, galactose, maltose, maltotriose, lactose, cellobiose, mannose, ribose, dextran, talose, allose, xylose, levoglucan, cellulose or starch, more preferentially being glucose;
- the alkylpolyglycoside(s) is (are) chosen from cetystearyl glucoside, arachidylglucoside, cocoglucoside, myristyldiglucooside, isostearylglucoside, and mixture(s) thereof, preferably from cetystearyl glucoside, arachidylglucoside, and a mixture thereof, and is (are) preferably arachidylglucoside;
- the alkylpolyglycoside(s) is (are) present in a total content ranging from
0.15% to 1.6% by weight, better still from 0.2% to 1.2% by weight, preferably from 0.3% to 0.8% by weight, relative to the total weight of the composition;

- the composition comprises at least one co-surfactant, preferably chosen from fatty alcohols comprising from 10 to 30 carbon atoms, in particular from 12 to 22 carbon atoms; preferentially, the alkylpolyglycoside(s) is (are) integrated in the preparation of the composition in the form of a mixture with the fatty alcohol(s) comprising from 10 to 30 carbon atoms, in particular from 12 to 22 carbon atoms;

- the alkylpolyglycoside(s) is (are) chosen from cetylstearyl glucoside, in particular used as a mixture with cetylstearyl alcohol, arachidyl glucoside, in particular used as a mixture with behenyl alcohol and arachydyl alcohol, and a mixture thereof, and is (are) preferably arachidyl glucoside, in particular used as a mixture with behenyl alcohol and arachidyl alcohol;

- the co-surfactant(s), in particular the fatty alcohol(s) comprising from 10 to 30 carbon atoms, is (are) present in a total content ranging from 0.8% to 6.8% by weight, better still from 1.2% to 5.1% by weight, and preferably from 1.6% to 3.4% by weight, relative to the total weight of the composition;

- the alkylpolyglycoside(s) plus the co-surfactant(s), in particular the fatty alcohol(s) comprising from 10 to 30 carbon atoms, is (are) present in a total content ranging from 1% to 8% by weight, better still from 1.5% to 6% by weight, and preferably from 2% to 4% by weight, relative to the total weight of the composition;

- the (poly)oxyalkylated wax(es) and the non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C, in particular the ester(s) of a fatty acid and of (poly)oxyalkylated glycerol ethers, are present in a respective total content such that the (poly)oxyalkylated wax(es) / non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C weight ratio is less than or equal to 30, advantageously less than or equal to 10, and more particularly ranging from 6 to 7;

- the (poly)oxyalkylated wax(es) and the alkylpolyglycoside(s), in particular the cetylstearyl glucoside and/or the arachidyl glucoside, are present in a respective total content such that the (poly)oxyalkylated wax(es) / alkylpolyglycoside(s) weight ratio is less than or equal to 200, advantageously less than or equal to 150, and more particularly ranging from 37.5 to 100;

- the (poly)oxyalkylated wax(es) and the alkylpolyglycoside(s), in particular the cetylstearyl glucoside and/or the arachidyl glucoside, plus the co-surfactants(s), preferably chosen from C_{10} - C_{3} fatty alcohols, are present in a respective total content such
that the (poly)oxyalkylenated wax(es) / alkylpolyglycoside(s) plus co-surfactant(s) weight ratio is less than or equal to 30, advantageously less than or equal to 20, and more particularly ranging from 7.5 to 15;

- the (poly)oxyalkylenated wax(es) and the non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C, in particular the ester(s) of a fatty acid and of (poly)oxyalkylenated glycerol ethers, together with the alkylpolyglycoside(s), in particular the cetylstearyl glucoside and/or the arachidyl glucoside, are present in a respective total content such that the (poly)oxyalkylenated wax(es) / non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C, together with the alkylpolyglycoside(s), weight ratio is less than or equal to 26, advantageously less than or equal to 14, and more particularly ranging from 6 to 9;

- the (poly)oxyalkylenated wax(es) and the non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C, in particular the ester(s) of a fatty acid and of (poly)oxyalkylenated glycerol ethers, together with the alkylpolyglycoside(s), in particular the cetylstearyl glucoside and/or the arachidyl glucoside, plus the co-surfactant(s), preferably chosen from \( C_{10}^{1}\cdot C_{3}^{0} \) fatty alcohols, are present in a respective total content such that the (poly)oxyalkylenated wax(es) / non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C together with the alkylpolyglycoside(s) plus the co-surfactant(s) weight ratio is less than or equal to 15, advantageously less than or equal to 10, and more particularly ranging from 3 to 6;

- the non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C, in particular the ester(s) of a fatty acid and of (poly)oxyalkylenated glycerol ethers, and the alkylpolyglycoside(s), in particular the cetylstearyl glucoside and/or the arachidyl glucoside, are present in a respective total content such that the non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C / alkylpolyglycoside(s) weight ratio is greater than or equal to 0.02, advantageously greater than or equal to 0.1, and more particularly ranging from 0.1 to 0.3;

- the non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C, in particular the ester(s) of a fatty acid and of (poly)oxyalkylenated glycerol ethers, and the alkylpolyglycoside(s), in particular the cetylstearyl glucoside and/or the arachidyl glucoside, plus the co-surfactant(s), preferably chosen from \( C_{10}^{1}\cdot C_{3}^{0} \) fatty alcohols, are present in a respective total content such that the non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C / alkylpolyglycoside(s) plus the co-surfactant(s)
weight ratio is greater than or equal to 0.1, advantageously greater than or equal to 0.5, and more particularly ranging from 0.5 to 1.5;
- said composition composition is free of ionic surfactant(s), and in particular free of anionic surfactant(s);
- said composition comprises at least one compound chosen from an aqueous-phase gelling agent, a film-forming polymer, which is preferably hydrophilic, in particular water-soluble, and a mixture thereof;
- the total content of aqueous-phase gelling agent(s) is greater than or equal to 0.1% by weight, better still greater than or equal to 0.3% by weight, relative to the total weight of the composition, preferably inclusively between 0.3% and 5% by weight, more preferentially between 0.3% and 4% by weight, relative to the total weight of the composition;
- said composition may comprise at least one colorant chosen from one or more pulverulent dye(s), preferably metal oxides, and in particular iron oxides;
- the metal oxide(s) is (are) preferably present in a content of greater than or equal to 2% by weight relative to the total weight of the composition, and advantageously inclusively between 3% and 15% by weight relative to the total weight of the composition;
- said composition may be a makeup composition, a makeup base or "base coat", or a "top coat" composition to be applied onto a makeup.

Other characteristics, properties and advantages of the present invention will emerge more clearly on reading the description and the examples that follow.

**Aqueous phase**

The composition according to the invention comprises an aqueous phase, which may form a continuous phase of the composition.

The aqueous phase comprises water. It may also comprise at least one water-soluble solvent.

In the present invention, the term "water-soluble solvent" denotes a compound that is liquid at ambient temperature (20°C) and atmospheric pressure (760 mmHg), and water-miscible.

The water-soluble solvents that may be used in the compositions according to the invention may also be volatile.
Among the water-soluble solvents that may be used in the compositions in accordance with the invention, mention may be made in particular of lower monoalcohols containing from 1 to 5 carbon atoms such as ethanol and isopropanol, and glycols containing from 2 to 8 carbon atoms such as ethylene glycol, propylene glycol, 1,3-butylene glycol and dipropylene glycol.

The aqueous phase (water and optionally the water-miscible solvent) is generally present in the composition according to the present patent application in a content ranging from 20% to 90% by weight, relative to the total weight of the composition, preferably ranging from 25% to 80% by weight, preferentially ranging from 30% to 70% by weight and better still from 45% to 60% by weight relative to the total weight of the composition.

The water is generally present in the composition according to the present patent application in a content ranging from 20% to 90% by weight, relative to the total weight of the composition, preferably ranging from 25% to 80% by weight, preferentially ranging from 30% to 70% by weight and better still from 45% to 60% by weight relative to the total weight of the composition.

**Aqueous-phase gelling agent**

A composition according to the invention advantageously comprises at least one aqueous-phase gelling agent.

This (these) gelling agent(s) is (are) capable of gelling the aqueous phase of the compositions according to the invention.

Preferably, the gelling agent(s) is (are) one or more polymer(s) present in the aqueous phase of the composition.

For the purposes of the present patent application, the term "polymer for gelling the aqueous phase" is intended to mean a polymer that is capable of gelling the aqueous phase of the compositions according to the invention.

The gelling polymer that may be used according to the invention may in particular be characterized by its capacity to form in water, beyond a certain concentration $C^*$, a gel characterized by oscillatory rheology ($\mu = 1$ Hz) by a flow threshold $T_e$ at least equal to 10 Pa. This concentration $C^*$ may vary widely according to the nature of the gelling polymer under consideration.

More particularly, this (these) gelling polymer(s) is (are) advantageously
chosen from:
- homopolymers or copolymers of acrylic acid or methacrylic acid, or salts thereof and esters thereof, and in particular the products sold under the names Versicol F or Versicol K by the company Allied Colloid,
- Ultrahold 8 by the company Ciba-Geigy, and polyacrylic acids of Synthalen K type, and salts, in particular sodium salts, of polyacrylic acids (corresponding to the INCI name sodium acrylate copolymer) and more particularly a crosslinked sodium polyacrylate (corresponding to the INCI name sodium acrylate copolymer (and) caprylic/capric triglycerides) sold under the name Luvigel EM by the company, 
- copolymers of acrylic acid and of acrylamide sold in the form of the sodium salt thereof under the name Reten by the company Hercules, the sodium polymethacrylate sold under the name Darvan No. 7 by the company Vanderbilt, and the sodium salts of polyhydroxy carboxylic acids sold under the name Hydagen F by the company Henkel,
- polyacrylic acid/alkyl acrylate copolymers of Pemulen type;
- AMPS (polyacrylamidomethylpropanesulfonic acid partially neutralized with aqueous ammonia and highly crosslinked) sold by the company Clariant,
- AMPS/acrylamide copolymers of Sepigel or Simulgel type sold by the company SEPPIC,
- polyoxyethyleneated AMPS/alkyl methacrylate copolymers (crosslinked or non-crosslinked) of the Aristoflex HMS type sold by the company Clariant,
- associative anionic polymers, among which mention may be made of copolymers derived from (meth)acrylic acid / C₈₋₁₅, better still C₁₋₃, preferably C₁₋₂ alkyl (meth)acrylate / (meth)acrylate of a C₆₋₁₃, better still C₁₂₋₁₄, preferably C₁₅₋₂₂, even more preferentially C₁₈ or C₂₂, fatty alcohol, and a mixture thereof, which is alkoxylated or glycerolated, such as the Aculyn products sold by the company Rohm & Haas, and in particular:
  - copolymers derived from acrylic acid / ethyl acrylate / stearyl methacrylate which is polyoxyethyleneated, for example using 20 mol of ethylene oxide, such as the product sold under the name Aculyn 22® by the company Rohm & Haas;
  - copolymers derived from acrylic acid / ethyl acrylate / behenyl methacrylate which is polyoxyethyleneated, for example using 25 mol of ethylene oxide, such as the product sold under the name Aculyn 28® by the company Rohm & Haas;
and blend(s) thereof, and advantageously the anionic associative polymer(s) is (are) chosen from the copolymers having the following INCI name: ACRYLATES / STEARETH-20 METHACRYLATE COPOLYMER, ACRYLATES / BEHENETH-25 METHACRYLATE COPOLYMER, and a blend thereof.

The choice of the aqueous-phase gelling agent(s) is advantageously made so as to retain a composition which, except for pigment(s), is opalescent and has a very fine particle size.

The total content of aqueous-phase gelling agent(s) is greater than or equal to 0.1% by weight, better still greater than or equal to 0.3% by weight, relative to the total weight of the composition, preferably inclusively between 0.3% and 5% by weight, more preferentially between 0.3% and 4% by weight, relative to the total weight of the composition;

**Film-forming polymers**

The compositions according to the present patent application preferably comprise at least one hydrophilic or lipophilic, preferably hydrophilic, better still water-soluble, film-forming polymer.

Such film-forming polymers preferentially have, in addition to their film-forming properties, aqueous-phase gelling properties.

In the present patent application, the term "film-forming polymer" is intended to mean a polymer that is capable, by itself or in the presence of an auxiliary film-forming agent, of forming a macroscopically continuous deposit, and preferably a cohesive deposit, and even better still a deposit of which the cohesion and mechanical properties are such that said deposit can be isolated and manipulated individually, for example when said deposit is prepared by pouring onto a non-stick surface such as a Teflon-coated or silicone-coated surface.

In general, the content of "film-forming polymer" solids in the compositions according to the present patent application ranges from 0.1% to 40%, preferably from 0.5% to 30% and better still from 1% to 20% by weight relative to the total weight of the composition.

The hydrophilic film-forming polymer may be a water-soluble polymer or may be in dispersion in an aqueous medium.

Among the film-forming polymers that can be used in the composition of the present invention, mention may be made of synthetic polymers, of free-radical type or of
polycondensate type, and polymers of natural origin, and mixtures thereof.

Examples of water-soluble film-forming polymers that may be mentioned include:

- proteins, for instance proteins of plant origin such as wheat proteins and soybean proteins; proteins of animal origin such as keratins, for example keratin hydrolysates and sulfonic keratins;
- cellulose polymers such as hydroxyethyl cellulose, hydroxypropyl cellulose, methyl cellulose, ethyl hydroxyethyl cellulose and carboxymethyl cellulose, and also quaternized cellulose derivatives;
- acrylic polymers or copolymers, such as polyacrylates or polymethacrylates;
- vinyl polymers, for instance polyvinylpyrrolidones, copolymers of methyl vinyl ether and of malic anhydride, the copolymer of vinyl acetate and of crotonic acid, copolymers of vinylpyrrolidone and of vinyl acetate; copolymers of vinylpyrrolidone and of caprolactam; polyvinyl alcohol;
- anionic, cationic, amphoteric or non-ionic chitin or chitosan polymers;
- gum arabic, guar gum, xanthan derivatives, karaya gum, acacia gum;
- alginates and carrageenans;
- glycoaminoglycans, hyaluronic acid and its derivatives;
- shellac resin, sandarac gum, dammar resins, elemi gums and copal resins;
- deoxyribonucleic acid;
- mucopolysaccharides such as chondroitin sulfates;
and mixtures thereof.

The film-forming polymer may also be present in the composition in the form of particles dispersed in an aqueous phase, which is generally known as a latex or pseudolatex. Techniques for preparing these dispersions are well known to those skilled in the art.

As an aqueous dispersion of film-forming polymer, use may be made of the acrylic dispersions sold under the names Neocryl XK-90®, Neocryl A-1070®, Neocryl A-1090®, Neocryl BT-62®, Neocryl A-1079® and Neocryl A-523® by the company Avecia-Neoresins, Dow Latex 432® by the company Dow Chemical, Daitosol 5000 AD® or Daitosol 5000 SJ® by the company Daito Kasey Kogyo; Syntran 5760® by the company Interpolymer Allianz Opt®, by the company Rohm and Haas, or else the aqueous dispersions of polyurethane which are sold under the names Neorez R-981® and Neorez
R-974® by the company Avecia-Neoresins, Avalure UR-405®, Avalure UR-410®, Avalure UR-425®, Avalure UR-450®, Sancure 875®, Avalure UR-445® and Sancure 2060® by the company Noveon, Impranil 85® by the company Bayer, Aquamere H-151 1® by the company Hydromer; the sulfopolyesters sold under the brand name Eastman AQ® by the company Eastman Chemical Products, vinyl dispersions, for instance Mexomere PAM®, aqueous dispersions of polyvinyl acetate, for instance Vinybran® from the company Nisshin Chemical or those sold by the company Union Carbide, aqueous dispersions of terpolymer of vinylpyrrolidone, dimethylaminopropylmethacrylamide and lauryldimethylpropylmethacrylamidoammonium chloride, such as Styleze W from ISP, aqueous dispersions of polyurethane/polyacrylic hybrid polymers, such as those sold under the references Hybridur® by the company Air Products or Duromer® from National Starch, core/shell-type dispersions: for example, those sold by the company Atofina under the reference Kynar (core: fluoro- shell: acrylic) or else those described in document US 5 188 899 (core: silica - shell: silicone), and mixtures thereof.

A composition according to the invention may also comprise, as a variant of or additionally, a lipophilic polymer which may be in solution or as a dispersion in a non-aqueous solvent phase.

**Fatty phase**

A fatty phase in accordance with the invention comprises at least one wax.

In particular, in accordance with the present invention, a fatty phase comprise at least one (poly)oxyalkylenated wax.

The (poly)oxyalkylenated wax(es) advantageously has (have) an emulsifying property.

Preferably, the fatty phase consists predominantly of waxes, preferably of (poly)oxyalkylenated wax(es), and even more preferentially essentially consists of wax(es), preferably of (poly)oxyalkylenated wax(es).

This fatty phase may also comprise constituents chosen in particular from at least one non-(poly)oxyalkylenated wax, at least one volatile oil, at least one non-volatile oil, pasty fatty substances, and mixture(s) thereof.

**Wax(es)**
The wax(es) under consideration in the context of the present invention is (are) generally a water-insoluble lipophilic compound that is solid at ambient temperature (20°C) and at atmospheric pressure (760 mmHg), with a solid/liquid reversible change of state, having a melting point of greater than or equal to 30°C, which may be up to 200°C and in particular up to 70°C.

In particular, the waxes that are suitable for the invention may have a melting point of greater than or equal to 45°C and in particular greater than or equal to 55°C.

For the purpose of the invention, the melting point corresponds to the temperature of the most endothermic peak observed on thermal analysis (DSC) as described in Standard ISO 11357-3; 1999. The melting point of the wax may be measured using a differential scanning calorimeter (DSC), for example the calorimeter sold under the name DSC Q2000 by the company TA Instruments.

Preferably, the waxes comprise at least one crystallizable part, which is visible by X-ray diffraction observation.

Preferably, the waxes have an enthalpy of fusion AHf of greater than or equal to 70 J/g.

The measuring protocol is as follows:

A 5 mg sample of wax placed in a crucible is subjected to a first temperature increase from -20°C to 120°C, at a heating rate of 10°C / minute, and then is cooled from 120°C to -20°C at a cooling rate of 10°C / minute and finally subjected to a second temperature increase from -20°C to 120°C at a heating rate of 5°C / minute. During the second temperature increase, the following parameters are measured:
- the melting point (Mp) of the wax, as mentioned previously corresponding to the temperature of the most endothermic peak of the melting curve observed, representing the variation of the difference in power absorbed as a function of the temperature,
- AHf: the enthalpy of fusion of the wax, corresponding to the integral entire melting curve obtained. This enthalpy of fusion of the wax is the amount of energy required to make the compound change from the solid state to the liquid state. It is expressed in J/g.

The wax(es) may be hydrocarbon-based waxes, fluoro waxes and/or silicone waxes and may be of plant, mineral, animal and/or synthetic origin.

The wax(es) may be present in a total content of greater than or equal to 10% by weight relative to the total weight of the composition, better still greater than or equal to 15% by weight relative to the total weight of the composition. Preferably, it is (they are) present in a content ranging from 11% to 40% by weight, better still from 12% to 35% by
weight and even better still from 15% to 30% by weight relative to the total weight of the composition.

A composition according to the invention comprises at least one (poly)oxyalkylenated wax. Additionally, it may comprise at least one non-(poly)oxyalkylenated wax.

(Polv)oxyalkylenated waxes

According to the invention, the composition comprises at least one (poly)oxyalkylenated wax.

The (poly)oxyalkylenated wax(es) may in particular be hydrocarbon-based.

The term "hydrocarbon-based wax" is intended to mean a wax formed essentially from, or even constituted of, carbon and hydrogen atoms, and optionally oxygen and nitrogen atoms, and that does not contain any silicon or fluorine atoms. It may, however, contain alcohol, ester, ether, carboxylic acid, amine and/or amide groups.

The (poly)oxyalkylenated wax(es) used is (are) preferentially chosen from (poly)oxyalkylenated esterified beeswax, (poly)oxyalkylenated carnauba wax, (poly)oxyalkylenated lanolin wax, (poly)oxyalkylenated candelilla wax, and mixture(s) thereof.

According to one particular embodiment, the composition according to the invention comprises a total content of (poly)oxyalkylenated wax(es) of greater than or equal to 5% by weight relative to the total weight of the composition.

The composition according to the invention advantageously comprises a total content of (poly)oxyalkylenated wax(es) greater than or equal to 10% by weight, relative to the total weight of the composition, preferably between 12% and 40% by weight, more preferentially between 15% and 35% by weight, even better still between 20% and 30% by weight, relative to the total weight of the composition.

Non-(poly)oxyalkylenated waxes

The composition according to the invention may comprise at least one non-(poly)oxyalkylenated wax.

For the purposes of the present invention, the term "non-(poly)oxyalkylenated wax" is intended to mean waxes which do not have oxyalkylene group(s), in particular which are free of oxyethylene group(s).
Hydrocarbon-based waxes, for instance beeswax, lanolin wax or Chinese insect wax; rice wax, carnauba wax, candelilla wax, ouricury wax, esparto grass wax, cork fibre wax, sugarcane wax, Japan wax and sumach wax; montan wax, microcrystalline waxes, paraffin waxes and ozokerite; polyethylene waxes, the waxes obtained by Fisher-Tropsch synthesis and waxy copolymers, and also esters thereof, may preferably be used as non-(poly)oxyalkylenated wax(es).

Mention may also be made of waxes obtained by catalytic hydrogenation of animal or plant oils containing linear or branched C₁₆-C₃₂ fatty chains. Among these waxes that may in particular be mentioned are hydrogenated jojoba oil, isomerized jojoba oil such as the trans-isomerized partially hydrogenated jojoba oil manufactured or sold by the company Desert Whale under the commercial reference Iso-Jojoba-50®, hydrogenated sunflower oil, hydrogenated castor oil, hydrogenated coconut oil, hydrogenated lanolin oil and bis(1,1,1-trimethylolpropane) tetrastearate sold under the name Hest 2T-4S by the company Heterene, bis(1,1,1-trimethylolpropane) tetrabehenate sold under the name Hest 2T-4B by the company Heterene.

Mention may also be made of silicone waxes, for instance alkyl or alkoxydimethicones containing from 16 to 45 carbon atoms, and fluoro waxes.

The wax obtained by hydrogenation of olive oil esterified with the stearyl alcohol, sold under the name Phytowax Olive 18 L 57 or else the waxes obtained by hydrogenation of castor oil esterified with cetyl alcohol, sold under the names Phytowax Castor 16L64 and 22L73 by the company Sophim, may also be used. Such waxes are described in the application FR-A-2792190.

The composition may comprise at least one polar non-(poly)oxyalkylenated wax. The term "polar wax" is intended to mean waxes comprising in their chemical structure, in addition to carbon and hydrogen atoms, at least one highly electronegative heteroatom, such as O, N or P.

The polar non-(poly)oxyalkylenated wax(es) may be chosen from carnauba wax, candelilla wax, natural (or blanched) beeswax and synthetic beeswax, and mixture(s) thereof. A synthetic beeswax that may be mentioned is the wax sold under the name Cyclochem 326 A by Evonik Goldschmidt (INCI name: Synthetic Beeswax).

The composition may comprise at least one non-polar non-(poly)oxyalkylenated wax. Preferably, the non-polar non-(poly)oxyalkylenated wax(es) comprise(s) one or more chosen from polyethylene wax, paraffin wax, ozokerite, and mixture(s) thereof.
The composition may comprise a mixture of polar non-(poly)oxyalkylenated wax(es) and non-polar non-(poly)oxyalkylenated wax(es).

The non-(poly)oxyalkylenated wax(es) may be present in the form of an aqueous wax microdispersion. The term "aqueous wax microdispersion" is intended to mean an aqueous dispersion of wax particles, in which the size of said wax particles is less than or equal to approximately 0.1 µm.


In particular, these wax microdispersions may be obtained by melting the wax in the presence of a surfactant, and optionally of some of the water, followed by gradual addition of hot water with stirring. Intermediate formation of an emulsion of the water-in-oil type is observed, followed by a phase inversion with final production of a microemulsion of the oil-in-water type. On cooling, a stable microdispersion of solid colloidal wax particles is obtained.

The wax microdispersions may also be obtained by stirring the mixture of wax, surfactant and water using an agitation means such as ultrasonic waves, a high-pressure homogenizer or turbomixers.

The particles of the wax microdispersion preferably have average sizes of less than 1 µm (in particular ranging from 0.02 µm to 0.99 µm), preferably less than 0.5 µm (in particular ranging from 0.06 µm to 0.5 µm).

Preferably, the composition according to the invention is free of non-(poly)oxyalkylenated wax. However, according to one particular embodiment, the composition according to the invention comprises a non-(poly)oxyalkylenated wax content greater than or equal to 0.5% by weight relative to the total weight of the composition, and better still from 1% to 10% by weight, in particular from 2% to 8% by weight, relative to the total weight of the composition, more preferentially from 3% to 6% by weight relative to the total weight of the composition.

When at least one non-(poly)oxyalkylenated wax is present in the composition, the total content of (poly)oxyalkylenated wax(es) and the total content of non-(poly)oxyalkylenated wax(es) are such that the weight ratio of (poly)oxyalkylenated
wax(es) to non-(poly)oxyalkylenated wax(es) is greater than or equal to 3, better still
greater than or equal to 4, and preferably inclusively between 5 and 100.

According to one preferred embodiment, a composition according to the
invention comprises at least 50% by weight of (poly)oxyalkylenated wax(es), better still at
least 75% by weight of (poly)oxyalkylenated wax(es), more preferentially at least 90% by
weight of (poly)oxyalkylenated wax(es), even more preferentially 95% by weight of
(poly)oxyalkylenated wax(es) and better still 100% by weight of (poly)oxyalkylenated
wax(es), relative to the total weight of wax(es).

According to one preferred embodiment, the fatty phase comprises at least
50% by weight of (poly)oxyalkylenated wax(es), better still at least 75% by weight of
(poly)oxyalkylenated wax(es), more preferentially at least 90% by weight of
(poly)oxyalkylenated wax(es), even more preferentially 95% by weight of
(poly)oxyalkylenated wax(es) and better still 100% by weight of (poly)oxyalkylenated
wax(es), relative to the total weight of the fatty phase.

The compositions according to the invention may be free of organic oil(s) or
solvent(s), in particular free of non-volatile oil(s) and of volatile oil(s).

However, a composition according to the invention may comprise at least
one volatile oil and/or at least one non-volatile oil for example present in a total content
ranging from 0.05% to 20% by weight, preferably ranging from 0.1% to 15% by weight
and preferentially ranging from 0.1% to 10% by weight, relative to the total weight of the
composition.

A composition according to the invention is preferably free of pasty fatty
substances.

However, a composition according to the invention may comprise one or
more pasty fatty substances in a total content of greater than or equal to 0.01% by
weight relative to the total weight of the composition, for example between 0.1% and
5% by weight relative to the total weight of the composition.

**Emulsifying system**

A composition according to the invention comprises an emulsifying system
comprising:

- at least one non-ionic surfactant with an HLB value greater than or equal to 8 at 25°C, preferably chosen from (poly)oxyalkylated glycerol ethers, which are in particular oxyethylenated and/or oxypropylenated, and esters of a fatty acid, in particular a C₈₋₄ and preferably C₁₆₋₂ fatty acid, and of oxyethylenated and/or oxypropylenated glycerol ethers, preferably of oxyethylenated glycerol ethers, and

- at least one surfactant of alkylpolyglucoside type, preferably with one or more co-surfactant(s).

These surfactants are generally present in a total content (cumulative content) of greater than or equal to 2% by weight, in particular ranging from 2.5% to 8%, and better still from 3% to 7% by weight relative to the total weight of the composition.

**Non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C**


Reference may be made to the Kirk-Othmer Encyclopedia of Chemical Technology, volume 22, p. 333-432, 3rd edition, 1979, Wiley, for the definition of the emulsifying properties and functions of surfactants, in particular p. 347-377 of this reference.

The non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C is (are) chosen from (poly)oxyalkylated surfactants preferably comprising from 20 to 200 oxyalkylene groups, and more preferentially from (poly)oxyalkylated surfactants comprising at least one oxyethylene group (CH₂CH₂O)ₙ or (OCH₂CH₂)ₙ in which n is greater than or equal to 20, preferably inclusively between 2 and 200.

The non-ionic surfactant(s) with a Griffin HLB value greater than or equal to 8 at 25°C is (are) advantageously chosen from:

- (poly)oxyalkylated glycerol ethers, in particular oxyethylenated and/or oxypropylenated glycerol ethers, which may comprise from 20 to 200 oxyethylene and/or oxypropylene groups;

- (poly)oxyalkylated alcohols, in particular oxyethylenated and/or oxypropylenated alcohols, which may comprise from 20 to 200 oxyethylene and/or oxypropylene groups, preferably from 20 to 100 oxyethylene groups, in particular ethoxylated C₈₋₂₄ and preferably C₁₂₋₁₈ fatty alcohols such as ethoxylated stearyl...
alcohol comprising 20 oxyethylene groups (CTFA name: Steareth-20) such as Brij 78 sold by the company Uniqema, or ethoxylated cetearyl alcohol comprising 30 oxyethylene groups (CTFA name: Steareth-30);

- (poly)oxyalkylenated fatty acid esters, in particular esters of a fatty acid, in particular of a C₈-C₁₄ and preferably C₁₆-C₂₂ fatty acid, and of polyethylene glycol (or PEG) (which may comprise from 20 to 200 oxyethylene groups), such as PEG-50 stearate and PEG-40 monostearate sold under the name Myrj 52P® by the company Uniqema;

- esters of a fatty acid, in particular a C₆-C₁₄ and preferably C₁₆-C₂₂ fatty acid, and of (poly)oxyalkylenated, glycerol ethers, which are in particular oxyethylated and/or oxypropylenated (which may comprise from 20 to 200 oxyethylene and/or oxypropylene groups), for instance glyceryl monostearate polyoxyethylated with 200 oxyethylene groups, sold under the name Simulsol 220 TM® by the company SEPPIC; glyceryl stearate polyoxyethylated with 30 oxyethylene groups, for instance the product Tagat S® sold by the company Goldschmidt, glyceryl olate polyoxyethylated with 30 oxyethylene groups, for instance the product Tagat O® sold by the company Goldschmidt, glyceryl cocoate polyoxyethylated with 30 oxyethylene groups, for instance the product Varionic LI 13® sold by the company Sherex, glyceryl isostearate polyoxyethylated with 30 oxyethylene groups, for instance the product Tagat L® sold by the company Goldschmidt, and glyceryl laurate polyoxyethylated with 30 oxyethylene groups, for instance the product Tagat I® from the company Goldschmidt;

- esters of a fatty acid, in particular a C₈-C₁₄ and preferably C₁₆-C₂₂ fatty acid, and of (poly)oxyalkylenated sorbitol ethers, which are in particular oxyethylated and/or oxypropylenated (which may comprise from 20 to 200 oxyethylene and/or oxypropylene groups), for instance the polysorbate 60 sold under the name Tween 60® by the company Uniqema;

- and mixture(s) thereof; preferably, among the (poly)oxyalkylenated alcohols preferably comprising from 20 to 200 oxyethylene (or ethylene glycol) groups.

Preferably, a composition comprises at least one non-ionic surfactant with a Griffin HLB value at 25°C greater than or equal to 8, preferably greater than or equal to 10, chosen from (poly)oxyalkylenated glycerol ethers, esters of a fatty acid and of (poly)oxyalkylenated glycerol ethers, which are in particular oxyethylated, esters of a fatty acid, in particular a C₈-C₁₄ and preferably C₁₆-C₂₂ fatty acid, and of
(poly)oxyalkylenated glycerol ethers, which are in particular oxyethylenated, in particular
glyceryl stearate polyoxyethyleneated with 30 oxyethylene groups, for instance the product
Tagat S® sold by the company Goldschmidt or glyceryl isostearate polyoxyethyleneated
with 30 oxyethylene groups, for instance the product Tagat L® sold by the company
Goldschmidt.

A composition according to the invention has a content of non-ionic surfactant(s) with a Griffin HLB value at 25°C greater than or equal to 8, preferably greater than or equal to 10, in particular of an ester or esters of a fatty acid, in particular C₈-C₄₄ and preferably C₁₆-C₂₂ fatty acid, and of (poly)oxyalkylenated glycerol ethers,
which are in particular oxyethylenated, in particular glyceryl stearate polyoxyethyleneated with 30 oxyethylene groups, for instance the product Tagat S® sold by the company
Goldschmidt or glyceryl isostearate polyoxyethyleneated with 30 oxyethylene groups, for instance the product Tagat L® sold by the company Goldschmidt, greater than or equal to 1% by weight relative to the total weight of the composition, preferably ranging from
2% to 6% by weight.

**Alkylpolyglycoside**

The emulsifying system of a composition according to the invention comprises at least one surfactant of alkylpolyglycoside type.

For the purposes of the present invention, the term "alkylpolyglycoside" is intended to mean an alkylmonosaccharide (degree of polymerization 1) or an alkylpolysaccharide (degree of polymerization greater than 1).

The alkylpolyglycosides may be used alone or in the form of mixtures of several alkylpolyglycosides. They generally correspond to the following structure:

\[
R(0)(G)_x
\]

in which:
- the alkyl radical R is a linear or branched, preferably linear, and saturated or unsaturated, preferably saturated, C₁₂-C₂₂, preferably C₁₆-C₂₆, hydrocarbon-based chain,
- G is a saccharide residue, or reduced sugar, and x ranges from 1 to 5, preferably from 1.05 to 2.5 and more preferentially from 1.1 to 2.

The saccharide residue is preferably chosen from glucose, dextrose, sucrose, fructose, galactose, maltose, maltotriose, lactose, cellobiose, mannose, ribose, dextran, talose, allose, xylose, levoglucan, cellulose or starch. More preferentially, the saccharide
residue denotes glucose.

It should also be noted that each unit of the polysaccharide part of the alkylpolyglycoside may be in a or β isomer form, in L or D form, and the configuration of the saccharide residue may be of furanoside or pyranoside type.

It is, of course, possible to use mixtures of alkylpolysaccharides, which may differ from each other in the nature of the borne alkyl radical R and/or the nature of the bearing polysaccharide chain.

According to one particular embodiment, the alkylpolyglycoside used in a composition according to the invention is an alkylpolyglycoside with a C12-C22 alkyl chain.

According to one particular embodiment, the alkylpolyglycoside used in a composition according to the invention is preferably chosen from cetylstearyl glucoside, arachidylglucoside, cocoglucoide, myristylglucoside, isostearylglucoside, and mixture(s) thereof, preferably from cetylstearyl glucoside, arachidylglucoside, and a mixture thereof, and is preferably arachidylglucoside.

More particularly, the surfactant(s) of alkylpolyglycoside type, in particular the cetylstearyl glucoside and/or the arachidyl glucoside, is advantageously present in a composition of the invention in a total content preferably ranging from 0.15% to 1.6%, more preferentially from 0.2% to 1.2% by weight, even more preferentially from 0.3% to 0.8% by weight, relative to the total weight of the composition.

According to one particular preferred embodiment of the invention, the alkylpolyglycoside is used as a mixture with at least one co-surfactant.

**Co-surfactants**

A composition according to the invention advantageously comprises at least one co-surfactant.

This (these) co-surfactant(s) is (are) derived from the same raw material as the alkylpolyglycoside or is (are) added separately from the alkylpolyglycoside during the preparation of a composition according to the invention, and preferably is derived from the same raw material as the alkylpolyglycoside.

The co-surfactant(s) is (are) advantageously chosen from fatty alcohols.

The term "fatty alcohol" is preferably intended to mean comprising from 10 to 30 carbon atoms, and more particularly is intended to mean any saturated or unsaturated, branched or unbranched, pure fatty alcohol comprising from 10...
to 30 carbon atoms.

At least one fatty alcohol comprising a preferably linear and preferably saturated hydrocarbon-based chain comprising from 12 to 26 carbon atoms, preferably from 14 to 24 carbon atoms and more preferentially from 16 to 22 carbon atoms is preferably used.

As examples of fatty alcohols that may be used in combination with the alkylpolyglycoside(s) of the emulsifying system according to the invention, mention may be made of linear or branched fatty alcohols, of synthetic origin or alternatively of natural origin, for example alcohols derived from plant material (coconut, palm kernel, palm, etc.) or animal material (tallow, etc.). Needless to say, other long-chain alcohols may also be used, for instance ether alcohols or Guerbet alcohols. Finally, use may also be made of certain more or less long fractions of alcohols of natural origin, for instance coconut (C12 to C16) or tallow (C16 to C18) or compounds of diol or cholesterol type.

The fatty alcohol(s) that may be used in the context of the present invention is (are) preferably chosen from lauryl alcohol, myristyl alcohol, cetyl alcohol, stearyl alcohol, isostearyl alcohol, palmityl alcohol, oleyl alcohol, cetearyl alcohol (mixture of cetyl and stearyl alcohol), behenyl alcohol, erucic alcohol, arachidyl alcohol, and mixtures thereof. Cetearyl alcohol, and mixture(s) thereof, are preferably used.

Such fatty alcohols are in particular sold under the name Nafol by the company Sasol.

The co-surfactant(s), and in particular the C10-C30 fatty alcohol(s), may be present in any content ranging from 0.8% to 6.8% by weight, preferably from 1.2% to 5.1% by weight, and more preferentially from 1.6% to 3.4% by weight relative to the total weight of the composition.

It is particularly advantageous, according to the present invention, to jointly use a fatty alcohol as defined and an alkylpolyglycoside of which the alkyl radical R is identical to the hydrocarbon-based chain to at least one fatty alcohol retained, having the same number of carbons.

The fatty alcohol / alkylpolyglycoside emulsifying mixtures as defined above are known as such. They are in particular described in applications WO 92/06778, WO 95/13863 and WO 98/47610 and prepared according to the preparation methods indicated in said documents.

This (these) fatty alcohol(s) is (are) preferentially used jointly with the
alkylpolyglycoside(s) according to the invention, in commercially available fatty alcohol(s) / alkylpolyglycoside mixtures.

Among the particularly preferred fatty alcohol(s) / alkylpolyglycoside mixtures, mention may be made of the products sold by the company SEPPIC under the name Montanov®, such as the following mixtures:

- cetylstearyl alcohol / cocoyl glucoside - Montanov 82®,
- arachidyl alcohol and behenyl alcohol / arachidyl glucoside - Montanov 202®,
- myristyl alcohol / myristyl glucoside - Montanov 14®,
- cetylstearyl alcohol / cetylstearyl glucoside - Montanov 68®,
- C14-C22 alcohol / C12-C16 alkylglucoside - Montanov L®,
- cocoyl alcohol / cocoyl glucoside - Montanov S®, and

Preferably, an emulsifying system according to the invention is chosen from a mixture of cetylstearyl alcohol and cetylstearyl glucoside, for example sold by the company SEPPIC under the reference Montanov 68®, a mixture of arachidyl alcohol and behenyl alcohol / arachidylglucoside, for example sold by the company SEPPIC under the reference Montanov 202®, and a mixture thereof, and preferably comprises a mixture of arachidyl alcohol and behenyl alcohol / arachidylglucoside, as sold by the company SEPPIC under the reference Montanov 202®.

More particularly, an emulsifying system in accordance with the present invention comprises at least:

- one cetylstearyl alcohol / cetylstearyl glucoside mixture, as sold by the company SEPPIC under the name Montanov 68®, consisting of approximately 20% of cetylstearyl glucoside and approximately 80% of cetylstearyl alcohol;
- one arachidyl alcohol and behenyl alcohol / arachidyl glucoside mixture, as sold by the company SEPPIC under the name Montanov 202®, consisting of approximately 15% of arachidyl glucoside, 30% of behenyl alcohol and 55% of arachidyl alcohol.

Preferably, a composition according to the invention comprises an arachidyl alcohol and behenyl alcohol / arachidyl glucoside mixture, as sold by the company SEPPIC under the name Montanov 202®, consisting of approximately 15% of arachidyl glucoside, 30% of behenyl alcohol and 55% of arachidyl alcohol.
In addition to the opalescent properties conferred on said composition, such a mixture of arachidyl alcohol and behenyl alcohol / arachidyl glucoside provides good stability of the composition.

The co-surfactant(s) and the alkylpolyglycoside(s), and in particular the fatty alcohol(s) and the cetylstearyl glucoside and/or the arachidyl glucoside, are advantageously present in a composition according to the invention in a total content ranging from 1% to 8% by weight, more preferentially from 1.5% to 6% by weight, preferably from 2% to 4% by weight, relative to the total weight of the emulsion.

According to one particular embodiment, the combination according to the invention of at least one alkylpolyglycoside, preferably in combination with the co-surfactant(s) preferentially of fatty alcohol(s) type, with the non-ionic surfactant(s) with a Griffin HLB value at 25°C greater than or equal to 8, preferably of the type ester(s) of a fatty acid, in particular a C₈₋C₁₆ and preferably C₁₆₋C₂₂ fatty acid, and of (poly)alkylated glycerol ethers, which are in particular oxyethylated, constitutes the principal surfactant system of the composition.

The term "principal surfactant system" is intended to mean a system which, in its absence, does not result in the formation of a stable composition, and in particular

which does not result in a stable dispersion of the waxes in the aqueous phase.

According to one particular embodiment, the combination according to the invention of at least one alkylpolyglycoside, preferably in combination with the co-surfactant(s) preferentially of fatty alcohol(s) type, with the non-ionic surfactant(s) with a Griffin HLB value at 25°C greater than or equal to 8, preferably of the type ester(s) of a fatty acid, in particular a C₈₋C₁₆ and preferably C₁₆₋C₂₂ fatty acid, and of (poly)alkylated glycerol ethers, which are in particular oxyethylated, constitutes the sole surfactant system of the composition, with a view to dispersing the (poly)alkylated wax(es).

The term "sole" is intended to mean that any possible additional surfactant system is present in a content not exceeding 1%, and preferably not exceeding 0.5%. More preferably, the term "sole" denotes a total absence of any other surfactant system.

According to one particular embodiment, the cosmetic composition according to the present invention comprises less than 1% and preferably less than 0.5% by weight of triethanolamine, and better still is free of triethanolamine.
According to one particular embodiment, the cosmetic composition according to the present invention comprises less than 1% and preferably less than 0.5% by weight of triethanolamine stearate, and better still is free of triethanolamine stearate.

Preferably, a composition according to the invention comprises less than 2% by weight of additional emulsifying system relative to the total weight of the composition, or even less 1% by weight, and more preferentially is free of additional surfactant. In particular, a composition according to the invention is preferably free of additional ionic surfactant, in particular of additional anionic surfactant and of additional non-ionic surfactant.

**Colorants**

The compositions in accordance with the invention comprise at least one colorant.

This (or these) colorant(s) is (are) preferably chosen from pulverulent dyes, liposoluble dyes and water-soluble dyes, and mixtures thereof.

Preferably, the compositions according to the invention comprise at least one pulverulent colorant. The pulverulent colorants may be chosen from pigments and nacres, and preferably from pigments.

The pigments may be white or coloured, inorganic and/or organic, and coated or uncoated. Among the inorganic pigments, mention may be made of metal oxides, in particular titanium dioxide, optionally surface-treated, zirconium, zinc or cerium oxide, and also iron, titanium or chromium oxide, manganese violet, ultramarine blue, chromium hydrate and ferric blue. Among the organic pigments that may be mentioned are carbon black, pigments of D & C type and lakes based on cochineal carmine or on barium, strontium, calcium or aluminium.

The nacres may be chosen from white nacreous pigments such as mica coated with titanium or with bismuth oxychloride, coloured nacreous pigments such as titanium mica with iron oxides, titanium mica in particular with ferric blue or chromium oxide, titanium mica with an organic pigment of the abovementioned type, and also nacreous pigments based on bismuth oxychloride.

The liposoluble dyes are, for example, Sudan Red, D&C Red 17, D&C Green 6, β-carotene, soybean oil, Sudan Brown, D&C Yellow 11, D&C Violet 2, D&C Orange 5, quinoline yellow and annatto.

Preferably, the pigments contained in the compositions according to the
invention are chosen from metal oxides.

These colorants may be present in a content ranging from 0.01% to 30% by weight relative to the total weight of the composition, and in particular from 3% to 15% by weight, relative to the total weight of the composition.

Preferably, the colorant(s) is (are) chosen from one or more metal oxides that are present in a content of greater than or equal to 2% by weight relative to the total weight of the composition, and advantageously inclusively between 3% and 15% by weight relative to the total weight of the composition.

Preferably, the composition according to the invention is a leave-in composition. Advantageously, the composition is a makeup composition and in particular a mascara.

**ASSEMBLY**

An assembly for coating keratin fibres according to the invention may comprise an applicator suitable for applying said cosmetic composition for coating keratin fibres and, where appropriate, a packaging device suitable for receiving said composition.

**Applicator**

The applicator may comprise means for smoothing and/or separating keratin fibres, such as the eyelashes or the eyebrows, in particular in the form of teeth, bristles or other reliefs.

The applicator is arranged to apply the composition to the eyelashes or the eyebrows, and may comprise, for example, a brush or a comb.

The applicator may also be used for finishing of the makeup, over a region of the eyelashes or eyebrows that is made up or laden with composition.

The brush may comprise a twisted core and bristles held between the turns of the core, or may be made in yet another way.

The comb is, for example, produced from a single part by moulding of a plastic.

In certain embodiments, the application member is mounted at the end of a wand, which wand may be flexible, which may contribute to improving the comfort during application.

**Packaging device**
The packaging device may comprise a container for housing the composition for coating keratin fibres. This composition may then be withdrawn from the container by immersing the applicator therein.

This applicator may be firmly attached to a member for closing the container. This closing member may form a member for gripping the applicator. This gripping member may form a cap to be removably mounted on said container by any suitable means, such as screwing, click-fastening, coupling, etc. Such a container may thus reversibly house said applicator.

This container can be optionally equipped with a wiper suitable for removing a surplus of product taken by the applicator.

A process for applying the composition according to the invention to the eyelashes or the eyebrows may also include the following steps:
- forming a deposit of the cosmetic composition on the eyelashes or the eyebrows,
- leaving the deposit on the eyelashes or the eyebrows, it being possible for the deposit to dry.

It should be noted that, according to another embodiment, the applicator may form a product container. In such a case, a container may, for example, be provided for in the gripping member and an internal channel can internally connect this gripping member to the application members in relief.

Finally, it should be noted that the packaging and application assembly may be in the form of a kit, it being possible for the applicator and the packaging device to be housed separately in the same packaging article.

The examples above and that follow are given as illustrations of the present invention, and shall not limit the scope thereof.

**EXAMPLES**

1/ Preparation of three comparative mascara compositions outside the invention aimed at attesting to the synergy conferred by the pair of surfactants in accordance with the invention
These compositions were prepared as follows:

1. **Preparation of the fatty phase (G)**

   The waxes is (are) melted in a 500 ml jacketed heating pan with circulation of hot oil to control the temperature. Heating to approximately 90°C is carried out.

   When the waxes are melted and homogenized, the pigments ground beforehand...
using a three-roll mill are added and the mixture is homogenized using a Moritz with rotor/stator stirring.

/// Preparation of the aqueous phase (A)

5 A tall 600 ml beaker is used. The amount of water required, preheated by an electric kettle, is stirred slowly in this beaker using a Rayneri blender.

The ingredients of the aqueous phase are successively introduced, with continued slow stirring. Between each introduction, care is taken to ensure good dissolution of the compounds and homogenization of the medium. When an aqueous-phase gelling agent and/or a film-forming polymer is envisaged, it (they) may be introduced in a subsequent step.

The aqueous phase is then placed on a water bath (nominal temperature 90-92°C) until a temperature of 88-90°C is reached.

/// Emulsification

15 When the two phases are at the desired temperature, the emulsifying system and in particular the pair of surfactants according to the invention are melted. The heated aqueous phase is then very slowly added to the fatty phase while gradually increasing the stirring to 900 revolutions per minute. The stirring is generally maintained for 2 to 10 min.

iv. Temperature reduction

20 After the emulsification, the heating pan is placed on a Rayneri blender equipped with a butterfly paddle, which allows blending and homogenization during the temperature reduction, at low shear. The stirring speed is low so as not to incorporate air bubbles.

By means of an oil bath at 10°C circulating in the walls of the heating pan, the temperature is gradually reduced to ambient temperature (20°C): in steps of 10°C.

Preferably however, when the mixture reaches 45°C, the aqueous-phase gelling agent(s) and/or the film-forming polymer(s) are, where appropriate, added.

v. End of formulation

30 The mascara thus obtained is transferred into a closed jar to prevent it from drying out on contact with air; it is then necessary to wait 24 hours to check the homogeneity of the formulation and the correct dispersion of the waxes and, where appropriate, the pigments.
Preparation of a mascara composition using a first example of an emulsifying system in accordance with the invention in the presence of a wax in accordance with the invention versus three comparative mascara compositions outside the invention using this same emulsifying system in the presence of waxes not in accordance with the invention.

<table>
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<tr>
<th>Phases</th>
<th>Ingredients with percentage contents</th>
<th>Composition according to invention 1</th>
<th>Comparative composition 4</th>
<th>Comparative composition 5</th>
<th>Comparative composition 6</th>
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<tr>
<td>G</td>
<td>Beeswax oxyethylenated with 8 OE (Apifil CG from Gattefosse)</td>
<td>26</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td></td>
<td>Beeswax (White Beeswax SP 453P from Strahl &amp; Pitsch)</td>
<td>-</td>
<td>26</td>
<td>-</td>
<td>-</td>
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<tr>
<td></td>
<td>Polyglycerolated beeswax (Cera Bellina Wax from Koster Keunen)</td>
<td>-</td>
<td>-</td>
<td>26</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Mixture of polyglycerolated plant waxes (mimosa, jojoba, sunflower) (Hydracire S from Gattefosse)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Glyceryl monostearate oxyethylenated with 30 OE (Tagat® S from Evonik Goldschmidt)</td>
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<tr>
<td>Emulsifying system</td>
<td>Mixture of arachidyl polyglucoside, arachidyl alcohol and behenyl alcohol (15/55/30) (Montanov® 202 from SEPPIC)</td>
<td>3</td>
<td>3</td>
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</table>
Water q s 100

Pigments 7 7 7 7

Potassium hydroxide at 50% in water

0.05 0.05 0.05 0.05

Preservative system qs qs qs qs

These compositions were prepared as previously described.

3/ Preparation of a mascara composition using a second example of an emulsifying system in accordance with the invention in the presence of a wax in accordance with the invention versus three comparative mascara compositions outside the invention using this same emulsifying system in the presence of waxes not in accordance with the invention.

<table>
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<tr>
<th>Phases</th>
<th>Ingredients with percentage contents</th>
<th>Composition according to invention 2</th>
<th>Comparative composition 7</th>
<th>Comparative composition 8</th>
<th>Comparative composition 9</th>
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<tr>
<td></td>
<td>Water</td>
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<td></td>
<td>Pigments</td>
<td>7</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Potassium hydroxide at 50% in water</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Preservative system</td>
<td>qs</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

G

Beeswax oxyethylenated with 8 OE (Apifil CG from Gattefosse)

26

- - -

Beeswax (White Beeswax SP 453P from Strahl & Pitsch)

- 26 - -

Polyglycerolated beeswax (Cera Bellina Wax from Koster Keunen)

- - 26 -

Mixture of polyglycerolated plant waxes (mimosa, jojoba, sunflower) (Hydracire S from Gattefosse)

- - - 26

Emulsifying system

Glyceryl monostearate oxyethylenated with 30 OE (Tagat® S from Evonik Goldschmidt)

4 4 4 4
Mixture of cetylstearyl glucoside and of cetyl and stearyl alcohols (20/80) (Montanov® 68 from SEPPIC)

<table>
<thead>
<tr>
<th></th>
<th>Water</th>
<th>Pigments</th>
<th>Potassium hydroxide at 50% in water</th>
<th>Preservative system</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>qs 100</td>
<td>7</td>
<td>0.05</td>
<td>qs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

These compositions were prepared as previously described.

The compositions prepared are then observed under a microscope.

For the compositions in accordance with the invention 1 and 2, a very fine and translucent background with few wax crystals and good pigment dispersion was observed, promoting colour intensity.

For the comparative compositions outside the invention 1 to 9, larger wax crystals which sparkle under polarized light are observed, the medium is more opaque and the colour intensity is weaker.

4/ Comparison of a formula which is a reference in particular in terms of black intensity versus a composition in accordance with the invention

Two examples of a mascara composition, one outside the invention which is a reference in terms of black intensity result, "Million Cils Extra Black" from L'Oreal Paris, and another mascara formula in accordance with the invention such as the composition according to invention 1 described above, were prepared and compared with the naked eye.

Result

The two compositions tested produce an intense and glossy black, but the composition according to the invention using a (poly)oxyalkylenated wax in combination with the pair of surfactants according to the invention give rise to a film in a black which
appears to the naked eye to be even more intense and glossy.

It is understood that, in the context of the present invention, the weight percentages given for a compound or a family of compounds are always expressed as weight of solids of the compound in question.

Throughout the application, the wording "comprising one" or "including one" means "comprising at least one" or "including at least one", unless otherwise specified.
CLAIMS

1. Emulsion-type cosmetic composition for coating keratin fibres, comprising:
   - an aqueous phase,
   - at least one (poly)oxyalkylenated wax,
   - an emulsifying system capable of dispersing the (poly)oxyalkylenated wax(es),
     comprising:
     i) at least one non-ionic surfactant with an HLB value greater than or equal to 8 at 25°C, and
     ii) at least one surfactant of alkylpolyglycoside type.

2. Composition according to Claim 1, in which the (poly)oxyalkylenated wax(es) comprise(s) a polyethylene glycol wax comprising at least one oxyethylene group (CH2CH2)n or (OCH2CH2)n in which n is greater than or equal to 2.

3. Composition according to Claim 1 or 2, in which the (poly)oxyalkylenated wax(es) is (are) chosen from a (poly)oxyalkylenated beeswax, a (poly)oxyalkylenated siliconyl beeswax, a (poly)oxyalkylenated carnauba wax, a (poly)oxyalkylenated candelilla wax, a (poly)oxyalkylenated siliconyl candelilla wax, a (poly)oxyalkylenated lanolin wax, and mixture(s) thereof.

4. Composition according to Claim 1, 2 or 3 in which the (poly)oxyalkylenated wax(es) is (are) chosen from waxes having the following INCI name: Bis-PEG-12 Dimethicone Candelillate wax, Bis-PEG-12 Dimethicone Beeswax, Dimethicone PEG-8 Beeswax, PEG-6 Beeswax, PEG-8 Beeswax, PEG-12 Beeswax, PEG-20 Beeswax, PEG-2 Sorbitan Beeswax, PEG-6 Sorbitan Beeswax, PEG-8 Sorbitan Beeswax, PEG-20 Sorbitan Beeswax, PEG-12 Carnauba Wax, PEG-75 Lanolin Wax, and mixture(s) thereof.

5. Composition according to any one of the preceding claims, in which the total content of (poly)oxyalkylenated wax(es) is greater than or equal to 5% by weight, even better still greater than or equal to 10% by weight, relative to the total weight of the composition, preferably between 12% and 40% by weight, more preferentially between
15% and 35% by weight, even better still between 20% and 30% by weight, relative to the total weight of the composition.

6. Composition according to any one of the preceding claims, comprising at least 50% by weight of (poly)oxyalkylenated wax(es), preferably at least 75% by weight of (poly)oxyalkylenated wax(es), more preferentially at least 90% by weight of (poly)oxyalkylenated wax(es), even more preferentially 95% by weight of (poly)oxyalkylenated wax(es) and better still 100% by weight of (poly)oxyalkylenated wax(es), relative to the total weight of wax(es).

7. Composition according to any one of the preceding claims, in which the non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C is (are) present in a total content of greater than or equal to 1% by weight relative to the total weight of the composition, preferably between 1.5% and 8% by weight more preferably between 2% and 5% by weight relative to the total weight of the composition.

8. Composition according to any one of the preceding claims, in which the non-ionic surfactant(s) with an HLB value greater than or equal to 8, preferably greater than or equal to 10, is (are) chosen from:
   - (poly)oxyalkylenated glycerol ethers,
   - (poly)oxyalkylenated alcohols,
   - (poly)oxyalkylenated esters of a fatty acid and of polyethylene glycol,
   - esters of a fatty acid and of (poly)oxyalkylenated glycerol ethers,
   - esters of a fatty acid and of (poly)oxyalkylenated sorbitol ethers,
   and mixture(s) thereof; preferably from (poly)oxyalkylenated glycerol ethers, esters of a fatty acid and of (poly)oxyalkylenated glycerol ethers preferably comprising from 20 to 200 oxyethylene groups.

9. Composition according to any one of the preceding claims, in which the non-ionic surfactant(s) with an HLB value greater than or equal to 8, preferably greater than or equal to 10, is (are) chosen from (poly)oxyalkylenated glycerol ethers, esters of a fatty acid, in particular a C₉₋₄₋₂ and preferably C₁₋₂ fatty acid, and of (poly)oxyalkylenated glycerol ethers, which are in particular oxyethyleneated, preferably comprising from 20 to

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200 oxyethylene groups, in particular chosen from polyoxyethylenated glyceryl stearate comprising 30 oxyethylene groups and polyoxyethylenated glyceryl isostearate comprising 30 oxyethylene groups.

10. Composition according to any one of the preceding claims, in which the alkylpolyglycoside(s) is (are) chosen from the compounds having the following formula:

\[ R(0)(G)_x \]

in which formula:
- the alkyl radical \( R \) is a linear or branched, preferably linear, and saturated or unsaturated, preferably saturated, \( C_{12-22} \), preferably \( C_{16-20} \), hydrocarbon-based chain,
- \( G \) is a saccharide residue, or reduced sugar, and \( x \) ranges from 1 to 5, preferably from 1.05 to 2.5 and more preferably from 1.1 to 2, the saccharide residue preferably being chosen from glucose, dextrose, sucrose, fructose, galactose, maltose, maltotriose, lactose, cellobiose, mannose, ribose, dextran, talose, allose, xylose, levoglucan, cellulose or starch, more preferentially being glucose.

11. Composition according to any one of the preceding claims, in which the alkylpolyglycoside(s) is (are) chosen from cetylstearyl glucoside, arachidylglucoside, cocoglucoside, myristylglucoside, isostearylglucoside, and mixture(s) thereof, preferably from cetylstearyl glucoside, arachidylglucoside, and a mixture thereof, and is (are) preferably arachidylglucoside.

12. Composition according to any one of the preceding claims, in which the alkylpolyglycoside(s) is (are) present in a total content ranging from 0.15% to 1.6% by weight, preferably from 0.2% to 1.2% by weight and more preferentially from 0.3% to 0.8% by weight relative to the total weight of the composition.

13. Composition according to any one of the preceding claims, comprising at least one co-surfactant, preferably chosen from fatty alcohols comprising from 10 to 30 carbon atoms.

14. Composition according to the preceding claim, in which the co-surfactants(s) is (are) present in a total content ranging from 0.8% to 6.8% by weight,
preferably from 1.2% to 5.1% by weight and more preferentially from 1.6% to 3.4% by weight relative to the total weight of the composition.

15. Composition according to any one of the preceding claims, in which the (poly)oxyalkylated wax(es) and the non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C are present in a respective total content such that the (poly)oxyalkylated wax(es) / non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C weight ratio is less than or equal to 30, advantageously less than or equal to 10, and more particularly ranging from 6 to 7.

16. Composition according to any one of the preceding claims, in which the (poly)oxyalkylated wax(es) and the alkylpolyglycoside(s) are present in a respective total content such that the (poly)oxyalkylated wax(es) / alkylpolyglycoside(s) weight ratio is less than or equal to 200, advantageously less than or equal to 150, and more particularly ranging from 37.5 to 100.

17. Composition according to any one of Claims 13 to 16, in which the (poly)oxyalkylated wax(es) and the alkylpolyglycoside(s) plus the co-surfactants(s), preferably chosen from C_{18}-C_{30} fatty alcohols, are present in a respective total content such that the (poly)oxyalkylated wax(es) / alkylpolyglycoside(s) plus co-surfactant(s) weight ratio is less than or equal to 30, advantageously greater than or equal to 20, and more particularly ranging from 7.5 to 15.

18. Composition according to any one of the preceding claims, in which the (poly)oxyalkylated wax(es) and the non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C together with the alkylpolyglycoside(s) are present in a respective total content such that the (poly)oxyalkylated wax(es) / non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C together with the alkylpolyglycoside(s) weight ratio is less than or equal to 26, advantageously less than or equal to 14, and more particularly ranging from 6 to 9.

19. Composition according to any one of Claims 13 to 18, in which the (poly)oxyalkylated wax(es) and the non-ionic surfactant(s) with an HLB value greater
than or equal to 8 at 25°C together with the alkylpolyglycoside(s) plus the co-surfactant(s) are present in a respective total content such that the (poly)oxyalkylenated wax(es) / non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C together with the alkylpolyglycoside(s) plus the co-surfactant(s) weight ratio is less than or equal to 15, advantageously less than or equal to 10, and more particularly ranging from 3 to 6.

20. Composition according to any one of the preceding claims, in which the non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C and the alkylpolyglycoside(s) are present in a respective total content such that the non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C / alkylpolyglycoside(s) weight ratio is greater than or equal to 0.02, advantageously greater than or equal to 0.1, and more particularly ranging from 0.1 to 0.3.

21. Composition according to any one of Claims 13 to 20, in which the non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C and the alkylpolyglycoside(s) plus the co-surfactant(s), preferably chosen from C_{10-20} fatty alcohols, are present in a respective total content such that the non-ionic surfactant(s) with an HLB value greater than or equal to 8 at 25°C / alkylpolyglycoside(s) plus the co-surfactant(s) weight ratio is greater than or equal to 0.1, advantageously greater than or equal to 0.5, and more particularly ranging from 0.5 to 1.5.

22. Composition according to any one of the preceding claims, comprising at least one compound chosen from an aqueous-phase gelling agent, a film-forming polymer, which is preferably hydrophilic, in particular water-soluble, and a mixture thereof.

23. Composition according to any one of the preceding claims, in which the aqueous phase, preferably water, represent from 30% to 80% by weight and preferably from 40% to 70% by weight, relative to the total weight of the composition.

24. Composition according to any one of the preceding claims, comprising at least one colorant chosen from one or more pulverulent dyes, preferably metal oxides, and in particular iron oxides.

25. Composition according to any one of the preceding claims, comprising a film-forming polymer and a mixture thereof.
25. Process for coating keratin fibres, in particular for making up the eyelashes or eyebrows, comprising a step of applying a cosmetic composition for coating keratin fibres according to any one of the preceding claims.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61K8/39 A61Q1/10 A61K8/60 A61K8/92
ADD.

According to International Patent Classification (IPC) or both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A61K A61Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
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<tr>
<td>X</td>
<td>US 6 353 034 BI (AMALRIC CHANTAL [FR] ET AL) 5 March 2002 (2002-03-05) table VI, formula on II; example 1</td>
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* Anonymous: "GLYCERYL STEARATE & PEG-100 STEARATE EMULSIFYING WAX", Mystical Moments

- XP002731787, Retrieved from the Internet:

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Further documents are listed in the continuation of Box C. See patent family annex.

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Date of the actual completion of the international search: 10 November 2014

Date of mailing of the international search report: 23/12/2014

Name and mailing address of the ISA:
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NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Lenzen, Achim

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