(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 2 201 093 B1

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention of the grant of the patent:
02.11.2011 Bulletin 2011/44

(21) Application number: **08804759.2**

(22) Date of filing: **25.09.2008**

(51) Int Cl.:
C11D 17/06 *(2006.01)* ***C11D 3/40*** *(2006.01)*
C11D 3/50 *(2006.01)* ***C11D 17/02*** *(2006.01)*
C11D 3/37 *(2006.01)* ***C11D 1/14*** *(2006.01)*
C11D 1/29 *(2006.01)*

(86) International application number:
PCT/EP2008/062874

(87) International publication number:
WO 2009/047126 (16.04.2009 Gazette 2009/16)

(54) **LAUNDRY DETERGENT WITH PRETREATMENT ADDITIVE AND ITS USE**

WASCHMITTEL MIT VORBEHANDLUNGSADDITIV UND SEINE VERWENDUNG

DÉTERGENT À LESSIVE AVEC ADDITIF DE PRÉTRAITEMENT ET SON UTILISATION

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

(30) Priority: **12.10.2007 IN MU20352007**
08.01.2008 EP 08150099

(43) Date of publication of application:
30.06.2010 Bulletin 2010/26

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  AT BE BG CH CZ DE DK EE ES FI FR GR HR HU IS IT LI LT LU LV MC NL NO PL PT RO SE SI SK TR

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EP 2 201 093 B1

Printed by Jouve, 75001 PARIS (FR)

Description

[0001] This invention relates to granular laundry detergent compositions containing pre-treatment additives for intensive treatment of fabric during washing and to a process for use of the composition during hand washing of laundry.

BACKGROUND

[0002] It is known to include visually contrasting particles in granular laundry detergent compositions. The particles may deliver a functional ingredient and/or provide a visual cue.

[0003] In US 4082682, a minor proportion of contrastingly colored elongated soap particles is added to a detergent powder. The particles comprise a non substantive dye and fluorescer. The powder comprises a detergency builder compound. The soap particles contribute detergency to the composition and reduce foaming. Because the soap particles could sink onto the fabric it is a stated advantage of the particles that they do not cause staining of the fabric with which they come into contact.

[0004] In order to improve the visibility and weight effectiveness of a visual cue it is proposed in GB2358403A to form the contrasting particle from a film, for example, a coloured water-soluble polymer film. Such particles are of significantly larger average particle size in at least one dimension than the average particle size of the powder particles. The examples disclose 5 mm diameter circular or star shaped colored polymer film particles dry mixed into a built detergent powder comprising sodium linear alkylbenzene sulphonate anionic surfactant.

[0005] In WO2006/079416, it is disclosed that the polymer film particles used in GB2358403A may be unsuitable for use in some detergent powder applications, due to poor solubility. WO2006/079416 proposes a film based visual cue of high solubility. It is suggested to be possible to include functional ingredients within the film e.g. surface active agents, perfume, antioxidant, antifoam. The visual cues are preferably formed of gum Arabic and have a triangular or "spiky" appearance.

[0006] US4176079 describes a detergent powder composition comprising a water soluble polymer film. An enzyme is incorporated into a film, which is then cut into squares, rectangles or strips and added to detergent powder. Typical film compositions are polyvinyl alcohol 48.7% and nonionic surfactant 43.8% (balance water and enzyme). The cut functional film pieces have a surface area of approx 300 mm^2 per side. No dye or other additive is added to the film to make it stand out from the detergent powder. The film may be plasticised and aerated.

[0007] Particularly for laundry hand wash compositions there are several problems.

[0008] One problem is the pre-treatment of fabrics. Often stains are difficult to remove during a standard wash and the consumer needs to pre-treat stains by application of a composition to the localised area of the stain. This either requires purchasing several products, which is expensive and a hassle for the consumer, or the consumer uses more powder, which is wasteful.

[0009] Another problem is to make a cue that adds functionality, so that its weight effectiveness is improved, especially when added to water.

[0010] Another problem is the effectiveness of visual cues in reinforcing and conveying perfume attributes to the user.

[0011] Another problem is to make a visual cue that persists long enough to give the desired indication to the user and yet dissolves well enough not to be a concern to the user, especially at low temperatures and under hand wash conditions.

DEFINITIONS

Visual Cue

[0012] Means a consumer perceivable point of differentiation in a detergent composition. This could be a feature of the bulk composition: e.g. colour, viscosity, size of granules, or it could be achieved by having visually distinct particles included in the composition, in a minor amount.

Visual Cue Particle

[0013] Means a coloured speckle, film particle or other solid visually contrasting particle added to a detergent composition in a minor amount to function as a visual cue.

Lamellar Visual Cue (or Lamellae)

[0014] Means visual cue particles in the form of planar film material made into shapes. The shapes may be cut from a sheet of film or may be cast directly. Such lamellae are also called "film particles".

Flower Shaped (or Flower-Like)

[0015] Means planar film shapes (or lamellae) that have the outline of the shape of a flower with petals. Especially a stereotypical flower having a central generally circular area with a number, preferably six, of rotationally symmetrically dispersed "petals" radiating therefrom.

SUMMARY OF THE INVENTION

[0016] According to the present invention there is provided a granular laundry detergent composition comprising surfactant and 0.1 to 10 wt% soluble coloured lamellar visual cues made from a soluble film, wherein the visual cues have a cross-sectional area of from 5mm^2 to 100mm^2, **characterised in that** the film comprises 10 to 90 wt% surfactant to enable pre-treatment of fabric and that the film has a relative density of 0.2 to 0.8 kg/l which ensures that the visual cues float on water. Advan-

tageously the cross-sectional area of the visual cues enables them to be scooped into a human hand.

[0017] The inclusion of surfactant in the visual cue provides cleaning functionality. The low relative density and colour further provides a functional visual cue, which is clearly visible during the early stages of a hand wash due to its size and colour, and the fact that it floats. These attributes, allow the consumer to pick up at least one visual cue from the surface of the washing solution and rub it onto a fabric stain to pre-treat the stained area. With standard speckles, this is physically impossible as they are too small and they sink. Thus, according to a second aspect of the invention there is provided a method of using the composition comprising adding it to water and scooping at least one visual cue off the surface of the water and then rubbing it over an area of fabric that requires pre-treatment, for example a stained area.

DETAILED DESCRIPTION OF THE INVENTION

The detergent formulation

[0018] The visual cues may be added to a major proportion of visually contrasting granular laundry detergent composition.

[0019] The precise content of the granular laundry detergent composition is not critical for putting the invention into practice. The only restriction is that the granular composition must not unduly affect the ability of the visual cues to separate out to form a separate highly visible floating portion, when the detergent composition is added to water.

[0020] The granular laundry detergent composition may be built or unbuilt, low or high foaming, and contain any suitable type of detersive surfactant. However, it is preferred for handwash applications that they are built high foaming compositions comprising anionic surfactant. Phosphate and/or carbonate builders are preferred. It is especially beneficial if the surfactant system in the powder has synergistic compatibility with the anionic surfactant in the visual cue. Such surfactant combinations are well known in the field.

[0021] The granular composition may be manufactured by any of the known processes, such as spray drying, dry mixing and combinations thereof. It may be formed by using adjunct granules. It is desirable that the visual cues are post dosed to the composition, preferably using a low shear mixer to ensure an even distribution of the visual cues through the granular composition. The film particles are included in the total composition at a weight percentage in the range 0.01 to 10 wt%, preferably 0.03 to 2 wt% most preferably 0.1 to 1 wt%.

[0022] The compositions may suitably contain from 10 to 80%, preferably from 15 to 70% by weight, of detergency builder. Preferably, the quantity of builder is in the range of from 15 to 50% by weight.

[0023] Often granular detergents used for hand washing of laundry include inorganic phosphates, more especially sodium tripolyphosphate. Other possible phosphate builders are sodium orthophosphate and pyrophosphate.

[0024] Sodium tripolyphosphate is preferably present in an amount of from 10 to 40 wt%, more preferably from 15 to 35 wt%, most preferably from 20 to 30 wt%.

[0025] Alternative inorganic builders that may be used in place of or in addition to phosphates are sodium carbonate, layered silicates, amorphous aluminosilicates.

[0026] Alternatively or additionally, the detergent compositions of the invention may contain as builder a crystalline alkali metal (preferably sodium) aluminosilicate (zeolite). Preferred zeolites are zeolite A (zeolite 4A), and zeolite MAP as described and claimed in EP 384 070B.

[0027] Organic builders that may be used include polycarboxylate polymers such as polyacrylates and acrylic/maleic copolymers; polyaspartates; monomeric polycarboxylates such as citrates, gluconates, oxydisuccinates, glycerol mono-, di- and trisuccinates, carboxymethyloxysuccinates, carboxymethyloxymalonates, dipicolinates, hydroxyethyl iminodiacetates, alkyl and alkenyl malonates and succinates; and sulphonated fatty acid salts.

[0028] Especially preferred organic builders are citrates, suitably used in amounts of from 5 to 30 wt %, preferably from 10 to 25 wt %; and acrylic polymers, more especially acrylic/maleic copolymers, suitably used in amounts of from 0.5 to 15 wt %, preferably from 1 to 10 wt %.

[0029] Builders, both inorganic and organic, are preferably present in alkali metal salt, especially sodium salt, form.

[0030] Other ingredients that are beneficially contained within a granular detergent composition include any that are conventionally employed in such compositions. Especially preferred are ingredients conventionally used in hand washing compositions. Thus, sodium sulphate, enzymes, fluorescers, dye transfer inhibiters, anti redeposition agents, shading dye and enzymes are desirably included. Although it is possible to include bleach, this is less preferred for hand wash compositions.

[0031] Use of a green granule in the composition is advantageous if used with film colours that are associated with flowers.

[0032] The visual cue effect due to this floral colour selection is further amplified by the green "stem" colour contrast in the granular composition. This is especially important for use with perfumes evocative of nature, such as floral perfumes.

The Film particle

a) Composition of the visual cues

[0033] The visual cues are made of coloured film. The essential components of the film are water-soluble polymer, surfactant and a non-fabric-substantive colorant. Optional further ingredients are: adjuncts to assist in the

manufacture of the film, for instance release agents, other functional ingredients, and water. Besides its effect of control of relative humidity of the film, water also assists in plasticising the film and regulates its solubility.

[0034] The polymer is selected from water soluble film forming polymers, especially those used in formulation of detergent powders. Preferred polymers include polymers which dissolve and/disperse completely in water within 30 minutes with agitation at a temperature anywhere in the range of from 20 to 60°C.

[0035] Preferred water soluble polymers are those capable of being cast into a film or solid mass, for example as described in Davidson and Sittig, Water-Soluble Resins, Van Nostrand Reinhold Company, New York (1968). Preferred water-soluble resins include polyvinyl alcohol, cellulose ethers, polyethylene oxide, starch, polyvinylpyrrolidone, polyacrylamide, polyvinyl methyl ether-maleic anhydride, polymaleic anhydride, styrene maleic anhydride, hydroxyethylcellulose, hydroxypropylmethylcellulose, polyethylene glycols, carboxymethylcellulose, polyacrylic acid salts, alginates, acrylamide copolymers, guar gum, casein, ethylene-maleic anhydride resin series, polyethyleneimine, ethyl hydroxyethylcellulose, ethyl methylcellulose, hydroxyethyl methylcellulose, sugars. Lower molecular weight water-soluble, polyvinyl alcohol film-forming resins are preferred.

[0036] Polyvinyl alcohols preferred for use therein have an average molecular weight anywhere between 1,000 and 1,000,000, preferably between 5,000 and 250,000, for example between 15,000 and 150,000. Hydrolysis, or alcoholysis, is defined as the percent completion of the reaction where acetate groups on the resin are substituted with hydroxyl, -OH, groups, A hydrolysis range of from 60-99% of polyvinyl alcohol film-forming resin is preferred, while a more preferred range of hydrolysis is from about 70-90% for water-soluble, polyvinyl alcohol film-forming resins. The most preferred range of hydrolysis is 80-89%. As used in this application, the term "polyvinyl alcohol" includes polyvinyl acetate compounds with levels of hydroloysis disclosed herein.

[0037] Another suitable polymer is a polyvinyl alcohol film, made of a polyvinyl alcohol copolymer having a comonomer having a carboxylate function.

[0038] The preferred grade of PVA picks up water only at an RH well above that of granular detergent compositions. Thereby, it protects the other film ingredients from decomposition by water and soluble dyes from bleeding. Fluorescer can be included in the film to increase the effect of the visual cue. A low level of suitably coloured dye may also be included to counter any yellowing. Shading dye and Aloe Vera may be included in the film too.

[0039] The visual cue film particle may comprise 10 to 80% polymer or polymer mixture.

[0040] The cue must contain surfactant to remove stubborn stains. In particular, the visual cue needs to have a minimum of 10 % surfactant, but preferably > 20 %. Although any suitable surfactant or surfactant system, may be used. The surfactant is preferably an anionic surfactant, especially if the granular composition comprises a builder. At least 10 wt% anionic surfactant is preferably included in the film.

[0041] Suitable anionic surfactants include are well-known to those skilled in the art. Examples of high-foaming sulphonate or sulphate type surfactants include alkylbenzene sulphonates, particularly linear alkylbenzene sulphonates having an alkyl chain length of C_8-C_{15}; primary and secondary alkylsulphates, particularly C_8-C_{15} primary alkyl sulphates; olefin sulphonates; alkyl xylene sulphonates; dialkyl sulphosuccinates; and fatty acid ester sulphonates. Sodium salts are generally preferred.

[0042] Further information is given in the open literature, for example, in "Surface-Active Agents and Detergents", Volumes I and II, by Schwartz, Perry and Berch.

[0043] The preferred anionic surfactants are alkylbenzene sulphonates, more especially linear alkylbenzene sulphonate (LAS), which is preferably present in an amount of from 12 to 24 wt%, more preferably from 12 to 22 wt% and especially from 15 to 22 wt%.

[0044] Even more preferred are primary alcohol sulphates (PAS), particularly C_8-C_{18}, preferably C_{12}-C_{15}, primary alcohol sulphates. A particularly preferred surfactant is primary alcohol sulphate (PAS) with a carbon chain length of 12. Visual cue Film particles containing up to 50 % PAS, may be used.

[0045] The film may additionally include a second surfactant. The second surfactant is preferably chosen from amphoteric surfactants, zwitterionic surfactants, nonionic surfactants and ethoxylated anionic surfactants.

[0046] Preferred amphoteric second surfactants are amine oxides. The most preferred amine oxide is coco dimethylamine oxide.

[0047] Preferred zwitterionic second surfactants are betaines, and especially amidobetaines, for example, coco amidopropyl betaine.

[0048] Preferred nonionic second surfactants include the primary and secondary alcohol ethoxylates, especially the C8-C20 aliphatic alcohols ethoxylated with an average of from 1 to 20 moles of ethylene oxide per mole of alcohol, and more especially the C_{10}-C_{15} primary and secondary aliphatic alcohols ethoxylated with an average of from 1 to 10 moles of ethylene oxide per mole of alcohol.

[0049] Preferred ethoxylated anionic second surfactants, include alkyl ether sulphates (ethoxylated alcohol sulphates).

[0050] Also suitable for use as second surfactants in the visual cues of the present invention are C_8-C_{18} alkyl monoethanolamides, for example, coco monoethanolamide.

[0051] The second surfactant system used in the film particle may additionally comprise minor amounts, e.g. less than 5% of the film, of cationic surfactant.

[0052] The surfactant, or surfactant system, fulfils two functions in the film. It enhances the solubility of the film and it provides detersive action to enable the film to be used directly on wetted stains. Surfactant may be includ-

ed at a level of up to 90 wt%, preferably up to 75 wt%, most preferably up to 60 wt% in the film.

[0053] The visual cue needs to be easily visible in wash liquor as well as against the background of the detergent formulation, therefore it needs to be coloured. Non fabric-substantive colorants are included in the film composition at a level of 0.05 to 0.5 wt%, preferably 0.1 to 0.3 wt%, most preferably 0.15 to 0.25 wt%.

[0054] Suitable colorants include any that are used to colour detergent liquids or powders. Yellow, blue, violet, lilac, purple, red, orange, green, pink are preferred colours. White may also be used if the remainder of the detergent composition is of sufficient contrast. However, white is not preferred because it does not have very high visibility on the water surface.

[0055] Preferably, the film is the same colour as detergent variant The "colour" of the variant is the predominant colour of the packaging and marketing material used to represent that variant. However, it is also within the scope of the invention to have different coloured visual cue film particles for different types of pre-treatment, all included in one composition in one pack. Once added to water one colour or a mix of coloured cues may easily be selected and scooped up for use either separately, or in combination.

[0056] Yellow cues did not have a high visual contrast from a white powder before film cues. Now, with the improved contrast due to the higher cross section area, they can be used as natural floral cues along with the preferred floral colours.

b) Size and shape of the visual cue film particles

[0057] To achieve the required level of visibility to function as a visual cue in the composition and to be easily seen when floating on the water surface the film particles need to be significantly bigger than the average detergent powder particles. The particle size of granules in the detergent composition typically ranges from 0.1 to 2 mm. The film particles are also advantageously a different shape from the generally spherical granules in the detergent composition. The film particle size in two dimensions is preferably at least 3 mm, more preferably at least 4 mm. In the third dimension the film particle is the thickness of the film, which is at most 1mm, preferably 0.4 mm, more preferably 0.25mm, most preferably 0.2 mm thick.

[0058] Being this flat shape also assists the film particles to float.

[0059] Each visual cue film particle has a cross sectional area of between 5 mm^2 and 100 mm^2. Preferably, the number of particles that will be dosed to each wash lies in the range 20 to 200. The preferred cross-sectional area of a film particle is 10 to 30 mm^2, preferably 15 to 20 mm^2, whereby the size of the film particle enables it to be scooped easily into a human hand from the wash liquor. It is preferred that if the composition is a built granular laundry detergent composition then the visual cues should have a maximum diameter at least twice that of the detergent granules.

[0060] The invention also provides a shaped visual cue, which does not segregate during mixing, handling, or transport, but which does segregate in use. Cues may be shaped into the form of petals, hexagons, squares, circles, stars.

[0061] Preferably, the visual cue is petal shaped and the petal is the same colour as detergent variant.

[0062] To maximise the impact of the film particle as a visual cue for perfume the film is cut into the shape of something natural and normally associated with a smell, e.g. petal, flower, floret etc. Ideally the shape and also, most ideally, the colour of the film particle is linked to the perfume. We have found that the size is less important to cue for perfume than either shape or colour.

[0063] In a modification of the shape of the film particle it is formed to resemble a petal with a central dot or hole to make it look more like a real flower. The latter further reduces the weight too.

[0064] The film may be used flat or it may be formed into a three dimensional shape, for example by making larger bubbles from two sheets of film laminated together around their edges, or in some other more complex configuration, like "bubble wrap". Provided buoyancy is maintained, the cavities may be filled with other ingredients that assist in the pre-treatment of fabrics. These may be liquids, pastes or solids. Such ingredients may additionally or alternatively be included into the film itself.

c) relative density of the film particles

[0065] The film used should float on water. To achieve this for sufficient time while the visual cue dissolves we have found that it should have a density of between 200 and 800 g/l, preferably between 230 and 500 g/l, most preferably 250 to 400 g/l. Surprisingly we have found that film particles of this density and having the preferred particle dimensions set forth above, do not unduly segregate from a detergent powder during manufacture or during storage and transportation. This is advantageous because it means that the particles provide a uniform level of visibility on the surface of the pack during use and it also assists in ensuring that roughly the same number of particles are does to the wash and thus ensures that the ability to pre-treat with the floating particles is not hindered by their separation in the pack.

[0066] The low relative density ensures that the film particles float on the surface of an aqueous wash liquor. This is achieved by a combination of the chemicals used and the degree of aeration applied to the film during its manufacture. The bubbles of air also diffuse light, which has the effect of enhancing visibility and distinctiveness of the film; especially when it is floating on the water surface. The bubbles are also thought to improve the dissolution of the film.

[0067] The film may be made of low density by inclusion of porosity in the manufacturing stage. This can be

by means of large light diffusing bubbles of gas beaten in to the mixture during film making or it can be achieved by gas evolved from film ingredients (e.g. citric acid and carbonate). The bubbles can be nano-bubbles. Film with capillaries may also be used. Also films with ribs that form open capillaries and meshes or films with active and lightweight ingredients in its "pore".

Method of use of the detergent composition with pretreater

[0068] The composition is added to water. This can be done before or after the clothes. Immediately, the pretreatment film particles float and appear to separate from the remainder of the composition. The consumer is reassured to see that the brightly coloured particles are not coming into direct contact with the clothes (although no harm would be done if they did). The film particles slowly dissolve on the surface over a period of 5 minutes to 30 minutes. The powder or liquid dissolves in the water faster and delivers builder to the water; if it is a built composition.

[0069] If pre-treatment is needed, the consumer may scoop film particles off the water surface using their hand and use these particles to pretreat fabric. Between 3 and 10 particles may easily be scooped up at once, depending on the level of treatment desired. Thus, the consumer is in control of the dosage of surfactant to be used for pre-treatment.

[0070] Furthermore, use of the cue in this way, in conjunction with a wash liquor, to provide building or some other enhancement of the detergency of the cue gives improved detergency relative to use of the cues on their own.

[0071] A further advantage of the visual cue floating is that it avoids the problems of variable speed of dispersion and/or dissolution that can occur if the particle gets embedded in clothing at the bottom of the wash liquor. This is a particular problem for hand washing processes.

[0072] A yet further advantage of the visual cue floating during the early stages of the wash is that the film particles are highly visible to the consumer. This means that they effectively continue to communicate the benefit of improved fragrance or other benefit for which they are designed to cue. For instance, by selecting cues in the shape and colour of small florets it has been shown that the consumer perceives a floral perfume more hedonistically and expresses clear preference for a formulation containing the perfume and the cues over one without cues or with a cue that does not look so much like a floret (i.e. a hexagonal cue of equivalent area). For communicating perfume or fabric care benefits during the wash cues that float are also preferred by potential consumers over cues that sink.

Examples

[0073] Under static conditions shapes need to dissolve not faster than 10 minutes and not slower than 30 minutes, preferably between 15 and 25 minutes.

Pre-treatment

[0074] A white carbonate built granular laundry detergent formulation comprising a floral perfume and primary alcohol sulphate as the main surfactant was combined with 0.5 wt% yellow film cues comprising 47wt% polyvinylalcohol, 48wt% primary alcohol sulphate, non substantive yellow colorant and water. The relative density of the film was approx 0.3. The yellow film was just under 0.2 mm thick on average and had been cut into floret shapes with a maximum diameter of approximately 5 mm in the other two dimensions.

[0075] A standard dosage of the composition including the visual cues was added to water at 35 °C and immediately the visual cue florets floated and dispersed over the surface of the water in the washing vessel and contributed to a perception of a pleasant floral perfume given off by the wash liquor.

[0076] A handful of florets were easily scooped up using the fingers as a sort of strainer and the wet florets were rubbed with finger ends over a piece of cotton cloth stained with tomato oil. The stain was easily removed in a few seconds. As a control experiment, at the same time an identical stain was wetted with the wash liquor and rubbed by a finger end and the stain was still visible for some time longer than the pre-treatment with the visual cue florets containing anionic surfactant.

Claims

1. A granular laundry detergent Composition comprising 0.1. to 10 wt% soluble coloured lamellar visual cues made from a soluble film, each soluble coloured lamellar visual cue having a planar cross-sectional area of from 5mm^2 to 100 mm^2, the relative density of the film being from 0.2 to 0.8 kg/l and the film comprising 10 to 90 wt% surfactant, water soluble polymer and non-fabric-substantive colorants.

2. A composition according to claim 1 in which the film comprises at least 10 wt% anionic surfactant.

3. A built granular laundry detergent composition according to claim 2 comprising soluble coloured lamellar visual cues that have a maximum diameter at least twice that of the detergent granules.

4. A detergent composition according to any preceding claim wherein the film has a relative density of less than 0.5, preferably less than 0.4.

5. A composition according to any preceding claim wherein the film comprises a polyvinyl alcohols polymer.

6. A composition according to any preceding claim wherein the film comprises a primary alky sulphates, or an alkyl ether sulphate surfactant.

7. A composition according to any preceding claim, which is a built composition.

8. A composition according to claim 7 wherein the builder is selected from the group comprising sodium tri polyphosphate, sodium carbonate and mixtures thereof.

9. A composition according to any preceding claim in which the film is coloured lilac, pink, yellow, violet, blue, red, purple, green or orange.

10. A composition according to any preceding claim in which the film is a flower-like shape.

11. A method of using the composition according to any preceding claim for fabric treatment comprising adding the composition to water and scooping at least one visual cue off the surface of the water and then rubbing the wetted visual cue over an area of the fabric that requires pre-treatment, for example a stained area.

Patentansprüche

1. Körnige Waschmittel-Zusammensetzung, die 0,1 bis 10 Gewichts-% lösliche gefärbte lamellare visuelle Hinweismarker umfasst, die aus einem löslichen Film hergestellt sind, wobei jeder lösliche gefärbte lamellare visuelle Hinweismarker eine ebene Querschnittsfläche von 5 mm^2 bis 100 mm^2 hat, die relative Dichte des Films 0,2 bis 0,8 kg/l beträgt und der Film 10 bis 90 Gewichts-% Tensid, wasserlösliches Polymer und Nicht-Gewebesubstantives Färbemittel umfasst.

2. Zusammensetzung gemäß Anspruch 1, wobei der Film wenigstens 10 Gewichts-% anionisches Tensid umfasst.

3. Builderhaltige körnige Waschmittel-Zusammensetzung gemäß Anspruch 2, die lösliche gefärbte lamellare visuelle Hinweismarker umfasst, die einen maximalen Durchmesser des wenigstens Zweifachen desjenigen der Waschmittelkörner haben.

4. Waschmittel-Zusammensetzung gemäß einem vorangehenden Anspruch, wobei der Film eine relative Dichte von kleiner als 0,5, vorzugsweise kleiner als 0,4, hat.

5. Zusammensetzung gemäß einem vorangehenden Anspruch, wobei der Film ein Polyvinylalkoholpolymer umfasst.

6. Zusammensetzung gemäß einem vorangehenden Anspruch, wobei der Film ein primäres Alkylsulfat- oder ein Alkylethersulfat-Tensid umfasst.

7. Zusammensetzung gemäß einem vorangehenden Anspruch, die eine builderhaltige Zusammensetzung ist.

8. Zusammensetzung gemäß Anspruch 7, wobei der Builder aus der Gruppe, umfassend Natrium-tripolyphosphat, Natriumcarbonat und Gemischen davon, ausgewählt ist.

9. Zusammensetzung gemäß einem vorangehenden Anspruch, wobei der Film lila, pink, gelb, violett, blau, rot, purpur, grün oder orange gefärbt ist.

10. Zusammensetzung gemäß einem vorangehenden Anspruch, wobei der Film eine blumenartige Form hat.

11. Verfahren der Verwendung der Zusammensetzung gemäß einem vorangehenden Anspruch zur Gewebebehandlung, umfassend Zusetzen der Zusammensetzung zu Wasser und Abschöpfen wenigstens eines visuellen Cues von der Oberfläche des Wassers und danach Reiben des befeuchteten visuellen Cues über eine Oberfläche des Gewebes, das eine Vorbehandlung erfordert, zum Beispiel über einen fleckigen Bereich.

Revendications

1. Composition détergente granulaire pour lessive comprenant de 0,1 à 10 % en poids de repères visuels lamellaires colorés solubles préparés à partir d'un film soluble, chaque repère visuel lamellaire coloré soluble comprenant une surface transversale planaire de 5 mm^2 à 100 mm^2, la densité relative du film étant comprise dans la plage allant de 0,2 à 0,8 kg/l et le film comprenant de 10 à 90 % en poids d'un tensioactif, un polymère soluble dans l'eau et un colorant non direct pour tissus.

2. Composition selon la revendication 1, dans laquelle le film comprend au moins 10 % en poids de tensioactif anionique.

3. Composition détergente granulaire pour lessive avec adjuvant selon la revendication 2, comprenant des repères visuels lamellaires colorés solubles qui possèdent un diamètre maximal d'au moins 2 fois celui des granules de détergent.

4. Composition détergente selon l'une quelconque des

revendications précédentes, dans laquelle le film possède une densité relative inférieure à 0,5, de préférence inférieure à 0,4.

5. Composition selon l'une quelconque des revendications précédentes, dans laquelle le film comprend un polymère d'alcool polyvinylique.

6. Composition selon l'une quelconque des revendications précédentes, dans laquelle le film comprend un tensioactif sulfate d'alkyle primaire ou sulfate d'éther alkylique.

7. Composition selon l'une quelconque des revendications précédentes, qui est une composition avec adjuvant.

8. Composition selon la revendication 7, dans laquelle l'adjuvant est choisi dans le groupe comprenant le tripolyphosphate de sodium, le carbonate de sodium et des mélanges de ceux-ci.

9. Composition selon l'une quelconque des revendications précédentes, dans laquelle le film est de couleur lilas, rose, jaune, violette, bleue, rouge, pourpre, verte ou orange.

10. Composition selon l'une quelconque des revendications précédentes, dans laquelle le film a la forme d'une fleur.

11. Procédé d'utilisation de la composition selon l'une quelconque des revendications précédentes, pour le traitement d'un tissu comprenant l'ajout de la composition a de l'eau et le ramassage d'au moins un repère visuel à la surface de l'eau, puis le frottement du repère visuel mouillé sur une zone du tissu qui nécessite un prétraitement, par exemple une zone tachée.

REFERENCES CITED IN THE DESCRIPTION

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