

Description

The present invention relates to facing materials for absorbent products, and specifically to clean, dry facings for sanitary napkins.

Background of the Invention

Facing layers have long been used in absorbent products to contain the absorbent core media and provide a surface for contacting the skin. Initially facings were developed for their softness, absorbency, and bulk or cushioning effect. Facings have also been developed which have improved fluid transfer properties. These facings have been characterized by a reduced rate of absorbency and reduced strike back of fluid from the absorbent core. One such facing is disclosed in U.S. Patent 4,391,869 which describes a low density fabric comprising a web of resin bonded synthetic polyester staple fibers. The fabric is saturation bonded and may be subject to conventional after treatments, including a repellent coating. Due to the overall binder coating, this fabric if repellent coated would not exhibit the enhanced repellency or stain resistance of the facing of the present invention.

Apertured plastic films have also been used in facings to reduce strike back, however, they have typically been used in conjunction with fabric layers to give the facing a cloth-like surface feel. Though a "plastic feel" is not desired in a facing, when apertured plastic films have been used as the top surface of a facing, the facings exhibit a clean dry surface, due to the repellent or hydrophobic properties of the plastic. One such facing is described in U.S. Patent No. 4,324,246.

GB-A-2153229 and GB-A-2103933 both disclose cover layers having a plurality of perforations therethrough.

The facing of the present invention is a repellent fibrous facing, which exhibits a clean, dry surface, without the "plastic feel" of an apertured plastic film facing. The enhanced repellency of the facing is achieved by a repellent top coat on a fibrous layer with only an intermittent binder coating.

Summary of Invention

The present invention comprises a nonwoven facing material with improved stain resistance, and a method for making the same. The facing material is useful as a facing for absorbent products, and particularly for sanitary products. The facing material of the present invention comprises a web of hydrophobic staple fibers, intermittently bonded with an absorbent cured binder material, and top coated with a repellent material, preferably a fluorochemical repellent material.

In one preferred embodiment of the invention, the web of hydrophobic fibers is apertured prior to the application of binder and repellent. The apertured web may be produced by the fluid rearranging process described in U.S. Patent No. 2,862,251, wherein the fibers are rearranged into a pattern of yarn-like bundles defining a pattern of apertures therebetween. When the web is apertured in this manner, it is preferred that the web contain approximately 5% to 20%, and most preferably 12% by weight of rayon staple fibers. The facings of the present invention exhibit improved repellency and stain resistance in terms of both stain area and stain intensity.

Brief Description of the Drawings

Figures 1-7 are 5x photomicrographs of various fibrous facing materials.

Detailed Description of the Invention

The facing material of the present invention is made from a starting web comprising hydrophobic fibers, such as polyester, acrylic, orlon, or nylon staple fibers. The web may comprise carded fibers, randomly arranged fibers as in an air-laid web, or a combination thereof. The web of fibers is intermittently bonded with an absorbent binder material, and top coated with a repellent material. As used in this application intermittent bonding refers to a binder pattern on the final fabric in which, after curing, the binder areas are well spaced from each other. Such a pattern may be achieved with a rotogravure roll with a diamond or diagonal pattern of print lanes with 6 lines per inch (2.4 lines/cm). As is well known the pattern of cured binder areas in the fabric may depend on many factors, including the pattern of application of the binder, the amount of binder added and the degree of migration of the binder, however, one skilled in the art is readily able to design and achieve an intermittent pattern of cured binder in a fabric. Generally, the binder

areas in the facing fabric of the present invention should comprise approximately 20% to 50% of surface area of the fabric. The absorbent binder used may be any one of the commercially available absorbent binders such as National Starch 4260 acrylic binder, B.F. Goodrich 2671 acrylic binder, or National Starch 125-2873 vinyl acetate/acrylic copolymer absorbent binder. The repellent may be any of the commercially available repellent materials such as the wax based solutions or emulsions, but is preferably a fluorochemical repellent material.

In a preferred embodiment of the invention the web is apertured for improved fluid strike through. According to a preferred embodiment of the process of the present invention, the starting web may be apertured by the fluid rearranging method described in U.S. Patent No. 2,862,251 which produces a web comprising yarn-like bundles of fibers with a pattern of apertures therebetween. When the apertures are produced in this manner it is preferred that the web comprises approximately 5% to 20%, and most preferably 12% by weight of rayon staple fibers for enhanced aperture clarity. A loss in aperture clarity, with the fibers extending into and across the apertures, reduces fluid strike through and can result in increased staining of the facing. Though rayon/polyester fabrics of 25, 75 and 100 percent polyester fibers show gradually increasing stain resistance, a fabric of 88% polyester and 12% rayon exhibits a further increase in aperture clarity and stain resistance.

The facings of the present invention are repellent and show improved stain resistance in terms of reduced stain area and stain intensity. Surprisingly, this improved stain resistance is achieved with the use of an absorbent binder. As set forth in the following Table, the facing of the present invention exhibits greatly improved stain resistance over fabrics made with repellent binders, and those made with an overall application of absorbent binder.

Thus, these facings may be used in a product for absorbing body fluids comprising an absorbent core, and the facing material overlying said absorbent core. Such products include sanitary napkins, diapers or bandages. The facing material may be adhered to the surface of the absorbent core, for example with a hot melt adhesive or an emulsion adhesive.

The facing material may be adhered to the absorbent core in an overall pattern or the facing material may be adhered to the absorbent core in a striped pattern. The facing material and the absorbent core may contain thermoplastic material, and the facing material may be heat bonded to the absorbent core.

In the following Table, the fabric of Sample 1, shown at 5x in Fig. 1, has a stain area of 4.4 sq. in. (25.8 cm²) and a stain intensity of 23.4 as measured on a Hunter Colorimeter, as described below. Sample 1 is a 260 grains/yard² (20 g/m²) card and bind fabric, consisting of 220 grains/yard² (17 g/m²) of a fiber blend of 50% Avtex SN 1913 rayon staple fibers and 50% Celanese 417 polyester staple fiber, with an overall coating of 40 grains/yard² (3.1 g/m²) of B. F. Goodrich 2671 acrylic absorbent binder. As may be seen in Fig. 1, this fabric exhibits a large, intensely colored stain and hence is not stain resistant.

Sample 2, shown at 5x in Fig. 2, is a 325 grains/yard² (25 g/m²) fabric consisting of 212 grains/yard² (16 g/m²) of a carded web of a blend of 50% 1.7 denier 1.5 inch (3.8 cm) Lenzing Lenzesa rayon and 50% 1.7 denier 1.5 inch (3.8 cm) DuPont 372 polyester fiber rearranged according to the method of U.S. Patent 2,862,251, at 120-130 psi (827-896 kPa) water pressure on a drum with 165 holes/in² (25.6 holes/cm²). Thereafter, 113 grains/yard² (9 g/m²) of binder solution is foamed into the web to provide an overall coating of binder. The binder used is National Starch 125-2873 vinyl acetate/acrylic self cross linking copolymer absorbent binder with 11 grains of repellent micro-crystalline wax emulsion with Zirconium salts, which renders the binder solution repellent. Sample 2 shows only slight improvement in stain area and intensity over sample 1.

Sample 3, shown at 5x in Fig. 3, is a 285 grains/yard² (22 g/m²) fabric consisting of 228 grains/yard² (18 g/m²) of a carded web of a blend of 88% by weight Celanese D-244 1.2 denier 1.5 inch (3.8 cm) polyester staple fiber and 12% by weight Avtex SN 1913 1.5 denier 1 1/8 inch (2.86 cm) Rayon staple fiber, with 56 grains/yard² (4.3 g/m²) of binder solution of National Starch 4260 acrylic absorbent binder, rendered repellent with I.C.I. F-31X fluorochemical repellent. The fibers were rearranged with 120-130 psi (827-896 kPa) of water, at 120-130° F. (48.9-54.4° C) using a 73.4 x 73.4 belt and a drum with 144 holes/in² (22.3 holes/cm²), prior to the addition of the binder solution, applied with a rotogravure roll at 23 lines per inch (9 lines/cm) to achieve overall saturation bonding. After the binder was cured, the fabric was top coated with ICI F-31X repellent in a padder operation resulting in 1 grain/yard² (77 mg/m²) repellent coating. The sample has a stain area and intensity similar to sample 2.

Sample 4, shown at 5x in Fig. 4, is a 350 grains/yard² (2.1 g/m²) fabric consisting of 242 grains/yard² (19 g/m²) of a carded web of Hoechst T-221 1.25 denier 1 1/2 inch (3.8 cm), polyester fiber rearranged as sample 3, with 97 grains/yard² (7.5 g/m²) of a binder solution of Rohm & Haas NW-1284 repellent acrylic binder to which TiO₂ has been added for fabric opacity. The binder solution is applied with a 23 line per inch (9 lines/cm) rotogravure roll to achieve overall binder saturation. After curing, the fabric is top coated

with a 3M FC-824 fluorochemical repellent in a padder operation resulting in a 1 grain/yd² (77 mg/m²) repellent coating. The sample shows some improvement in stain area and intensity, but is difficult to produce as the TiO₂ is difficult to maintain in solution and dries quickly, fouling the lanes of the rotogravure roll.

5 Sample 5, shown at 5X in Fig. 5, is a 280 grain/yd² (22 g/m²) fabric consisting of 229 grains/yd² (18 g/m²) of a carded web of a blend of 88% by weight Celanese D-244 1.2 denier, 1.5 inch (3.8 cm) polyester staple fiber containing 1.5% TiO₂, and 12% by weight of Avtex SN-1913 1.5 denier 1 1/8 inch (2.86 cm) rayon staple fiber rearranged as sample 3, with 50 grains/yd² (3.9 g/m²) of National Starch 4260 acrylic absorbent binder applied with a rotogravure roll at 23 lines/in. (9 lines/cm) to achieve overall saturation
10 bonding. After curing the binder, the fabric is top coated with I.C.I. F-31X repellent in a padder operation resulting in a 1 grain/yd² (77 mg/m²) repellent coating. This sample shows similar stain area and intensity to sample 4.

Sample 6 is a 280 grains/yd² (22 g/m²) fabric consisting of 229 grains/yd² (18 g/m²) of a carded web of the fiber blend of sample 5 and 50 grains/yd² (3.9 g/m²) of National Starch 4260 acrylic absorbent binder,
15 rearranged as sample 3. The binder is applied with a rotogravure roll in a diamond pattern of 6 lines in (2.4 lines/cm) at a 30° angle, the lanes of the print roll being 0.014" (0.35 mm) wide and 0.004" (0.1 mm) deep. After curing the binder, the fabric is top coated with I.C.I. F-31X repellent in a padder operation resulting in a 1 grain/yd² (77 mg/m²) repellent coating. The sample exhibits an unexpected strain resistance, with a stain area of only 3.5 sq. in. (22.6 cm²) and a stain intensity of only 4.8

20 Sample 7 is a 280 grains/yd² (22 g/m²) fabric of a 229 grain/yd² (18 g/m²) carded web of the fiber blend of samples 5 and 6, rearranged as sample 3, with 50 grains/yd² (3.9 g/m²) of Rohm and Haas 1715 repellent binder applied with the same rotogravure roll as used in making sample 6. After curing the binder, the fabric is top coated with I.C.I. F-31X repellent in a padder operation resulting in a 1 grain/yd² (77 mg/m²) repellent coating. The sample exhibits a stain area and intensity similar to sample 5.

TABLE

5	Sample	Fiber	Binder	Binder Application	Repellent Top Coat	Stain	
						Area ¹	Intensity ²
	1	50% Rayon 50% PET carded	absorbent	overall	no	4.4	23.4
10	2	50% Rayon 50% PET rearranged	absorbent rendered repellent	overall	no	4.14	16.9
	3	12% Rayon 88% PET with TiO_2 rearranged	absorbent rendered repellent	overall	yes	4.15	17.3
15	4	100% PET rearranged	repellent with TiO_2	overall	yes	3.68	12.6
	5	12% Rayon 88% PET with TiO_2 rearranged	absorbent	overall	yes	3.8	11.6
20	6	12% Rayon 88% PET with TiO_2 rearranged	absorbent	intermittent	yes	3.5	4.8
25	7	12% Rayon 88% PET with TiO_2 rearranged	repellent	intermittent	yes	3.79	10.0

1. Stain Area measured by the following test:

The facing material was adhesively bonded to an absorbent core of wood pulp fibers by spraying the undersurface of the facing with H.B. Fuller hot melt adhesive prior to assembling the facing on the absorbent core. The napkin was secured to a smooth surface, with the facing layer comprising the facing material exposed. A 10" x 3" (254 X 76mm) plexiglass template with

a central oval opening 1 1/2" long (38mm) and 3/4" (19mm) wide was placed over the napkin and 15 c.c. of synthetic menstrual fluid was poured into the oval opening. The template was removed, a 2.2 kg roller was placed atop the stain, rolled to one longitudinal end of the napkin and back across the stain to the other end, and back again, to traverse the length of the napkin 10 times. The roller then was removed and the facing allowed to dry. The stain area was measured using a Nikon Micro-plan II image analysis system manufactured by Laboratories Computer Systems Inc., 139 Main Street, Cambridge, Massachusetts. The average of ten measurements of the area is reported. The synthetic menstrual fluid used was an electrolytically active solution with a surface tension approximating that of menstrual fluid, and containing a red dye.

2. Stain Intensity measured on a Hunter Color-Difference Meter Model D-25-2 optical sensor from Hunter Associates Laboratory Inc., Fairfax, Virginia.

The above Table demonstrates the unexpected stain resistance of the facing of the present invention, comprising hydrophobic fibers intermittently bonded with an absorbent binder, and top coated with a repellent finish. The facing material of the present invention may be used as the facing layer of absorbent products such as sanitary napkins. When used as a facing layer, the facing material may be juxtaposed to the top surface of the absorbent core of the napkin, with or without an intervening fibrous layer, such as tissue, and may be glued in place or merely positioned on the napkin. The facing material may be wrapped around the absorbent core, and a fluid impervious layer may be positioned in the napkin beneath the absorbent core.

Claims

1. A nonwoven facing material, said facing material comprising a web of fibres bonded with a binder and said fibres and said binder being coated with a repellent material;
characterised in that said web comprises hydrophobic staple fibres;
said binder is an absorbent cured binder and said bonding is intermittent; and
said repellent material is coated onto said intermittently bonded web of hydrophobic staple fibres.
2. The nonwoven facing material of claim 1 wherein said repellent material is a fluorochemical repellent material.
3. The nonwoven facing material of claim 1 or claim 2 wherein said web has plurality of apertures therethrough.
4. The nonwoven facing material of any one of the preceding claims wherein said hydrophobic fibres are polyester fibres.
5. The nonwoven facing material of claim 3 or claim 4 wherein the fibres of said web are rearranged into

a central oval opening 1 1/2" long (38mm) and 3/4" (19mm) wide was placed over the napkin and 15 c.c. of synthetic menstrual fluid was poured into the oval opening. The template was removed, a 2.2 kg roller was placed atop the stain, rolled to one longitudinal end of the napkin and back across the stain to the other end, and back again, to traverse the length of the napkin 10 times. The roller then was removed and the facing allowed to dry. The stain area was measured using a Nikon Micro-plan II image analysis system manufactured by Laboratories Computer Systems Inc., 139 Main Street, Cambridge, Massachusetts. The average of ten measurements of the area is reported. The synthetic menstrual fluid used was an electrolytically active solution with a surface tension approximating that of menstrual fluid, and containing a red dye.

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characterised in that said web comprises hydrophobic staple fibres;
said binder is an absorbent cured binder and said bonding is intermittent; and
said repellent material is coated onto said intermittently bonded web of hydrophobic staple fibres.
2. The nonwoven facing material of claim 1 wherein said repellent material is a fluorochemical repellent material.
3. The nonwoven facing material of claim 1 or claim 2 wherein said web has plurality of apertures therethrough.
4. The nonwoven facing material of any one of the preceding claims wherein said hydrophobic fibres are polyester fibres.
5. The nonwoven facing material of claim 3 or claim 4 wherein the fibres of said web are rearranged into



yarn-like bundles defining a pattern of apertures therebetween.

6. The nonwoven facing material of any one of claims 1 to 4 wherein the web comprises hydrophobic staple fibres and rayon staple fibres;

said rayon staple fibres comprising from about 5 to about 20% by weight of the total fibres in said web.

7. The nonwoven facing material of any one of claims 3 to 5 wherein said web comprises from 80% to 95% by weight of the fibres of hydrophobic fibres, and, correspondingly, from 20% to 5% by weight of the fibres of rayon staple fibres.

8. The nonwoven facing material of claim 7 wherein said web comprises about 88% by weight of the fibres of polyester fibres and about 12% by weight of the fibres of rayon staple fibres.

9. A product for absorbing body fluids comprising an absorbent core and the nonwoven facing material of any one of claims 1 to 8 overlying said absorbent core.

10. A sanitary napkin comprising an absorbent core and the nonwoven facing material of any one of claims 1 to 8 overlying said absorbent core.

11. A diaper comprising an absorbent core and the nonwoven facing material of any one of claims 1 to 8 overlying said absorbent core.

12. A bandage comprising an absorbent core and the nonwoven facing material of any one of claims 1 to 8 overlying said absorbent core.

13. A method of making a nonwoven facing material with improved stain resistance, comprising the steps of:

- a. forming a web of staple fibers which are hydrophobic before bonding and coating,
- b. applying an absorbent binder material to said web in an intermittent pattern,
- c. curing said binder material, and
- d. applying a repellent material to said web.

14. The method of claim 13 wherein said web is apertured before the application of binder material.

15. The method of claim 13 or claim 14 wherein said hydrophobic fibers are polyester fibers.

16. A method of making a nonwoven facing material with improved stain resistance, comprising the steps of:

- a. forming a web of staple fibers which are hydrophobic before bonding and coating,
- b. rearranging the fibers of said web to form yarn-like bundles with a pattern of apertures therein,
- c. applying an absorbent binder material to said rearranged web of fibers, in an intermittent pattern,
- d. curing said absorbent binder material,
- e. applying a fluorochemical repellent material to said web,
- f. curing said repellent material to form a repellent treated fabric.

17. The method of any one of claims 13 to 16 wherein said web comprises 88% by weight of fibers of polyester and 12% by weight of fibers of rayon staple fibers.

18. The method of any one of claims 13 to 17 wherein the repellent material is a fluorochemical repellent material.

19. The method of any one of claims 13 to 18 wherein said web comprises staple fibres which are hydrophobic prior to bonding and coating and rayon staple fibres;

said rayon staple fibres comprising from about 5 to about 20% by weight of the total fibres in said web.

20. A method for making a product for absorbing body fluids comprising overlying an absorbent core with



the nonwoven facing material of any one of claims 1 to 8.

Patentansprüche

- 5 1. Nichtgewebtes Überzugsmaterial, wobei das genannte Überzugsmaterial eine mit einem Bindemittel verbundene Faserbahn umfasst und die genannten Fasern und das genannte Bindemittel mit einem wasserabstossenden Material beschichtet sind,
dadurch gekennzeichnet, daß
10 die genannte Faserbahn hydrophobe Stapelfasern umfasst,
das genannte Bindemittel ein absorbierendes, gehärtetes Bindemittel ist und das genannte Verbinden diskontinuierlich ist und
das genannte wasserabstossende Material auf die diskontinuierlich verbundene Bahn aus hydrophoben Stapelfasern aufgebracht ist.
- 15 2. Nichtgewebtes Überzugsmaterial nach Anspruch 1, bei dem das genannte wasserabstossende Material ein fluorchemisches, wasserabstossendes Material ist.
3. Nichtgewebtes Überzugsmaterial nach Anspruch 1 oder 2, bei dem die genannte Bahn eine Vielzahl von durchgehenden Öffnungen aufweist.
- 20 4. Nichtgewebtes Überzugsmaterial nach einem der vorstehenden Ansprüche, bei dem die genannten hydrophoben Fasern Polyesterfasern sind.
5. Nichtgewebtes Überzugsmaterial nach Anspruch 3 oder 4, bei dem die Fasern der genannten Bahn in garn-ähnliche Bündel umgeordnet sind, die dazwischen ein Muster von Öffnungen definieren.
- 25 6. Nichtgewebtes Überzugsmaterial nach einem der Ansprüche 1 bis 4, bei dem die Bahn hydrophobe Stapelfasern und Viskose-Stapelfasern umfasst, die genannten Viskose-Stapelfasern von etwa 5 bis etwa 20 Gew.-% der Gesamtfasern der genannten Bahn ausmachen.
- 30 7. Nichtgewebtes Überzugsmaterial nach einem der Ansprüche 3 bis 5, bei dem die Bahn von 80 bis 95 Gew.-% der Fasern hydrophobe Fasern und entsprechend von 20 bis 5 Gew.-% der Fasern Viskose-Stapelfasern umfasst.
- 35 8. Nichtgewebtes Überzugsmaterial nach Anspruch 7, bei dem die genannte Bahn etwa 88 Gew.-% der Fasern Polyesterfasern und etwa 12 Gew.-% der Fasern Viskose-Stapelfasern umfasst.
9. Produkt zum Absorbieren von Körperflüssigkeiten, umfassend einen absorbierenden Kern und das nichtgewebte Überzugsmaterial nach einem der Ansprüche 1 bis 8, das über dem genannten absorbierenden Kern liegt.
- 40 10. Damenbinde, umfassend einen absorbierenden Kern und das nichtgewebte Überzugsmaterial nach einem der Ansprüche 1 bis 8, das über dem genannten absorbierenden Kern liegt.
- 45 11. Windel, umfassend einen absorbierenden Kern und das nichtgewebte Überzugsmaterial nach einem der Ansprüche 1 bis 8, das über dem genannten absorbierenden Kern liegt.
- 50 12. Verband, umfassend einen absorbierenden Kern und das nichtgewebte Überzugsmaterial nach einem der Ansprüche 1 bis 8, das über dem genannten absorbierenden Kern liegt.
- 55 13. Verfahren zur Herstellung eines nichtgewebten Überzugsmaterial mit verbesserter Fleckfestigkeit, die folgenden Stufen umfassend:
 - a. Bilden einer Bahn aus Stapelfasern, die vor dem Verbinden und Beschichten hydrophob sind,
 - b. Aufbringen eines absorbierenden Bindemittel-Materials auf die genannte Bahn in einem diskontinuierlichen Muster,
 - c. Härten des genannten Bindemittel-Materials und
 - d. Aufbringen eines wasserabstossenden Materials auf die genannte Bahn.



14. Verfahren nach Anspruch 13, bei dem die genannte Bahn vor dem Aufbringen des Bindemittel-Materials mit Öffnungen versehen wird.
15. Verfahren nach Anspruch 13 oder 14, bei dem die genannten hydrophoben Fasern Polyesterfasern sind.
16. Verfahren zur Herstellung eines nicht gewebten Überzugsmaterial mit verbesserter Fleckfestigkeit, die folgenden Stufen umfassend:
 - a. Bilden einer Bahn aus Stapelfasern, die vor dem Verbinden und Beschichten hydrophob sind,
 - b. Umordnen der Fasern der genannten Bahn zur Bildung von garn-ähnlichen Bündeln mit einem Muster von Öffnungen darin,
 - c. Aufbringen eines absorbierenden Bindemittel-Materials auf die genannte umorgeordnete Faserbahn in einem diskontinuierlichen Muster,
 - d. Härten des genannten Bindemittel-Materials,
 - e. Aufbringen eines fluorchemischen, wasserabstossenden Materials auf die genannte Bahn und
 - f. Härten des genannten wasserabstossenden Materials zur Bildung eines wasserabstossend behandelten Stoffs.
17. Verfahren nach einem der Ansprüche 13 bis 16, bei dem die genannte Bahn 88 Gew.-% Fasern aus Polyester und 12 Gew.-% Fasern aus Viskose-Stapelfasern umfasst.
18. Verfahren nach einem der Ansprüche 13 bis 17, bei dem das wasserabstossende Material ein fluorchemisches wasserabstossendes Material ist.
19. Verfahren nach einem der Ansprüche 13 bis 18, bei dem die genannte Bahn Stapelfasern, die vor dem Verbinden und Beschichten hydrophob sind, und Viskose-Stapelfasern umfasst, wobei die genannten Viskose-Stapelfasern von etwa 5 bis 20 Gew.-% der Gesamtfasern der genannten Bahn ausmachen.
20. Verfahren zur Herstellung eines Produkts zum Absorbieren von Körperflüssigkeiten, umfassend das Bedecken eines absorbierenden Kerns mit dem nichtgewebten Überzugsmaterial nach einem der Ansprüche 1 bis 8.

Revendications

1. Matière de recouvrement non tissée, ladite matière de recouvrement comprenant une nappe de fibres liées par un liant et lesdites fibres et ledit liant étant revêtus d'une matière répulsive, caractérisée en ce que ladite nappe comprend des fibres discontinues hydrophobes, ledit liant est un liant absorbant durci et ladite liaison est intermittente ; et ladite matière répulsive est appliquée sur ladite nappe liée de façon intermittente en fibres discontinues hydrophobes.
2. Matière de recouvrement non tissée selon la revendication 1, dans laquelle ladite matière répulsive est une matière fluorochimique répulsive.
3. Matière de recouvrement non tissée selon la revendication 1 ou 2, dans laquelle ladite nappe présente une série de perforations.
4. Matière de recouvrement non tissée selon l'une quelconque des revendications précédentes, dans laquelle lesdites fibres hydrophobes sont des fibres de polyester.
5. Matière de recouvrement non tissée selon la revendication 3 ou 4, dans laquelle les fibres de ladite nappe sont regroupées en faisceaux similaires à des fils définissant un motif d'ouvertures entre eux.
6. Matière de recouvrement non tissée selon l'une quelconque des revendications 1 à 4, dans laquelle la nappe comprend des fibres discontinues hydrophobes et des fibres discontinues en rayonne ; lesdites fibres discontinues de rayonne constituant environ 5 à 20 % en poids des fibres totales dans ladite nappe.
7. Matière de recouvrement non tissée selon l'une quelconque des revendications 3 à 5, dans laquelle



ladite nappe comprend de 80 à 95 % en poids de fibres qui sont des fibres hydrophobes et, de façon correspondante, de 20 à 5 % en poids de fibres discontinues de rayonne.

- 5 8. Matière de recouvrement non tissée selon la revendication 7, dans laquelle ladite nappe comprend environ 88 % en poids de fibres en polyester et environ 12 % en poids de fibres discontinues de rayonne.
- 10 9. Produit destiné à absorber les fluides physiologiques comprenant un noyau absorbant et une matière de recouvrement non tissée selon l'une quelconque des revendications 1 à 8 recouvrant ledit noyau absorbant.
- 15 10. Serviette hygiénique comprenant un noyau absorbant et la matière de recouvrement non tissée selon l'une quelconque des revendications 1 à 8 recouvrant ledit noyau absorbant.
- 20 11. Couche comprenant un noyau absorbant et la matière de recouvrement non tissée selon l'une quelconque des revendications 1 à 8 recouvrant ledit noyau absorbant.
- 25 12. Bandage comprenant un noyau absorbant et la matière de recouvrement non tissée selon l'une quelconque des revendications 1 à 8 recouvrant ledit noyau absorbant.
- 30 13. Procédé de fabrication d'une matière de recouvrement non tissée possédant une meilleure résistance au tachage, qui consiste :
 - (a) à former une nappe de fibres discontinues qui sont hydrophobes avant liaison et revêtement ;
 - (b) à appliquer un liant absorbant à ladite nappe suivant un motif intermittent ;
 - 25 (c) à faire durcir ladite matière liante ; et
 - (d) à appliquer une matière répulsive à ladite nappe.
- 35 14. Procédé selon la revendication 13, dans lequel ladite nappe est perforée avant l'application de la matière liante.
- 40 15. Procédé selon la revendication 13 ou 14, dans lequel lesdites fibres hydrophobes sont des fibres de polyester.
- 45 16. Procédé de fabrication d'une matière de revêtement non tissée possédant une meilleure résistance au tachage, qui consiste :
 - (a) à former une nappe de fibres discontinues qui sont hydrophobes avant liaison et revêtement ;
 - (b) à regrouper les fibres de ladite nappe pour former des faisceaux similaires à des fils présentant un motif de perforations ;
 - (c) à appliquer une matière liante absorbante à ladite nappe regroupée de fibres suivant un motif intermittent ;
 - (d) à faire durcir ladite matière liante absorbante ;
 - (e) à appliquer une matière répulsive fluorochimique à ladite nappe ; et
 - (f) à faire durcir ladite matière répulsive pour former une étoffe traitée par une matière répulsive.
- 50 17. Procédé selon l'une quelconque des revendications 13 à 16, dans lequel ladite nappe comprend 88 % en poids de fibres de polyester et 12 % de fibres discontinues de rayonne.
- 55 18. Procédé selon l'une quelconque des revendications 13 à 17, dans lequel la matière répulsive est une matière répulsive fluorochimique.
19. Procédé selon l'une quelconque des revendications 13 à 18, dans lequel ladite nappe comprend des fibres discontinues qui sont hydrophobes avant liaison et revêtement et des fibres discontinues de rayonne, lesdites fibres discontinues de rayonne constituant environ 5 à 20 % en poids des fibres totales dans ladite nappe.
20. Procédé de fabrication d'un produit destiné à absorber les fluides physiologiques, qui consiste à recouvrir un noyau absorbant avec une matière de recouvrement non tissée selon l'une quelconque des revendications 1 à 8.

