

Description

Field of Invention

The present invention relates to adhesive bandages comprising a central pad area and adjacent adhesive areas, and more particularly, to adhesive bandages constructed as a unit from a single piece of bandage material.

Background of the Invention

Adhesive bandages comprising a central pad area and adjacent adhesive areas are well-known in the art and popular as first aid wound dressings. Current bandages generally comprise an elongated strip of cloth or plastic backing material coated on one surface with a pressure sensitive adhesive. A gauze or sponge pad is secured to the adhesive surface in a central location to serve as the wound cover. The wound facing surface of the pad may be plastic-coated or otherwise treated to prevent the pad from adhering to the wound. Plastic-coated release strips are placed over the adhesive areas and the entire assembly is placed in a sealed package and sterilized to be ready for use.

An alternate form of adhesive bandage, generally referred to as an island bandage, comprises a generally square, round or oval adhesive coated backing material with a centrally located pad forming an island surrounded by the adhesive surface. The adhesive surface is similarly covered by release paper before the bandage is packaged and sterilized.

US-A-2 476 924 (Stenvall) discloses a cloth based bandage in which the central pad portion is formed of a single strip of gauze which is folded upon itself to provide a plurality of layers. The folded gauze pad is secured to the base cloth.

The adhesive bandages of this type are characterized by their construction of two basic components — the adhesive coated backing material and the wound covering pad material. While such bandages are effective and desirable products, the component materials used in their construction and assembly of those component materials during production results in increased manufacturing and inventory costs.

It is accordingly an object of the present invention to provide an improved adhesive bandage. It is a further object of this invention to provide a low cost adhesive bandage through the use of inexpensive materials and low cost manufacturing techniques.

A yet further object of the present invention is to provide low cost wound dressings of the strip and island-type adhesive bandages. These and other objects of the present invention will be apparent from the ensuing description and claims of the invention.

GB-A-1 485 160 (Pall Corporation) discloses an adhesive bandage constructed of a single piece of bandage material and having a central pad portion, and outwardly extending, adhesive-coated portions comprising said material compacted into a thin, sheet-like structure. The central

pad portion comprises a single thickness uncompacted portion of the bandage material.

The bandage of the present invention as defined by Claim 1 is characterized in that the central pad portion comprises a folded, triple thickness of said bandage material the folded edge portions of which are secured to said adhesive-coated portions whereby said pad portion is restrained from unfolding. Adhesive bandages comprising an elongated strip of material having a centrally located pad area and adjacent adhesive portions extending from each side of the pad area are prepared from a single length of bandage material by over-lapping the center portion of the material in a Z-fold to provide a pad area comprising a triple thickness of the bandage material. The single thickness portions of the bandage material extending from each end of the folded pad portion are permanently compacted to provide a surface suitable for coating with adhesive. The folded portion of the pad is permanently secured to the adhesive portions to prevent unfolding. The bandage is preferably constructed of a heat-bondable, absorbent, non-woven batt material to provide loft and absorbency in the pad area, with the single thickness portions heat calendered to provide dense, sheet-like material to accept the adhesive coating.

The bandages are conveniently prepared from a continuous web having a width equal to the overall length of the desired bandage plus twice the pad length to allow for the Z-fold construction. The continuous web is fed through a folding station which places the Z-fold down the center of the web. The folded web next passes through a hot-roll calendering station where the edges of the folded area and the single thickness of web extending from each side of the folded area are compacted and heat-set to secure the fold and form a dense, nonwoven sheet-like structure extending from the folded area.

The web is next passed through an adhesive application station where a pressure-sensitive adhesive, preferably of a hot-melt-type, is coated onto the compacted web surfaces on either side of the folded area. Plastic-coated release paper is applied over the adhesive and the composite structure fed to a cutting station where strips are cut or stamped transverse to the machine direction of the web to obtain an adhesive bandage which is ready to be packaged and sterilized.

Additional processing steps are optionally included before cutting such as coating or glazing the wound contacting surface of the folded area to impart nonsticking properties. Also, as the bandages are cut from the composite web, the edges of the folded area may be heat-sealed or compacted along a narrow band to form a well-defined pad area.

In a similar manner, island dressings comprising a pad area surrounded by an adhesive area may be prepared by compacting the folded portion of the web in defined spaces across the width of the web. Adhesive is applied to these transverse areas as well as the longitudinal edges of

the web, and the bandages are cut from the web with a central pad area surrounded by the adhesive coated material.

The Z-fold construction of the pad portion further permits wound treating agents such as antibacterial or anesthetic agents to be incorporated within the folds of the pad if desired.

The web material is preferably a nonwoven fabric composed of absorbent fibers such as cellulose or rayon and heat-fusible fibers such as polyethylene or polypropylene, in relative proportions such that the pad of the finished bandage is soft and absorbent while the heat bonded and compacted areas are strong and stable.

Description of Drawings

FIGURE 1 is schematic representation in perspective of a process used to produce the adhesive bandages of the present invention.

FIGURE 2 is a cross-sectional view in perspective of the folded web through line 2—2 of FIGURE 1.

FIGURE 3 is a cross-sectional view in perspective of the folded web after compaction, through line 3—3 of FIGURE 1.

FIGURE 4 is a cross-sectional view in perspective of the compacted web after application of adhesive, through line 4—4 of FIGURE 1.

FIGURE 5 is a cross-sectional view in perspective of the web of FIGURE 4 after application of adhesive release papers, through line 5—5 of FIGURE 1.

FIGURE 6 is a cross-sectional view in perspective of the web of FIGURE 5 after cutting into strips, through line 6—6 of FIGURE 1.

FIGURE 7 is a top plan view from the pad side of a strip adhesive bandage, produced by the method of the present invention with the adhesive release strips removed.

FIGURE 8 is a top plan view of a square island adhesive bandage.

FIGURE 9 is a top plan view of a circular island adhesive bandage.

FIGURE 10 is a top plan view of a butterfly adhesive bandage.

Detailed Description of the Invention

The strip adhesive bandages of the present invention having a unitized construction are fabricated from a single, continuous-length of bandage material which is preferably a bulky, heat-fusible, absorbent, nonwoven fabric. The bandage is fabricated by forming a Z-fold down the center of the fabric, securing the Z-fold by heat sealing the edges thereof, and heat fusing the edge widths of the fabric extending from the folded portion to provide surfaces capable of accepting an adhesive. After applying the adhesive and covering the adhesive surfaces with release papers, the web is cut transversely in strips the width of the desired bandage.

The central pad portion of the bandage comprises a triple thickness of the starting bandage material. Since it is generally desirable for the

bandage pad to be absorbent as well as providing a cushioning effect, it is important for the initial bandage material to also possess these properties. In addition, since the Z-fold forming the pad area must be secured in some manner, the bandage material is preferably a heat-fusible composition which permits the Z-fold to be continuously and permanently heat sealed along the edges.

A bandage material meeting all the above requirements is a nonwoven fabric comprising a mixture of cellulose or other absorbent fibers and polyethylene or other heat-fusible fibers. The heat-fusible fibers are interspersed throughout the web and are preferably present in an amount of at least 10% by weight. The fabric preferably has sufficient thickness or bulk so that the triple-layered pad has a thickness of at least 2 mm in the final bandage. Nonwoven webs useful in the practice of the present invention are known in the art for use in other applications. See, for example, U.S. Patents Nos. 2,774,128; 3,067,747; 4,083,913; 4,160,159; and 4,307,721.

A particularly preferred bandage material is a low density, highly absorbent, thermal bonded nonwoven fabric comprising absorbent fibers and staple length polyester/polyethylene conjugate fibers. These nonwoven fabrics are produced by a process which includes producing a web comprising absorbent fibers and staple length polyester/polyethylene conjugate fibers; subjecting the web to a temperature sufficient to fuse the lower melting component of the conjugate fibers without fusing the higher melting component while maintaining the web under little or no compression; and cooling the web to resolidify the lower melting component of the conjugate fibers, thereby forming a nonwoven fabric bonded at sites where the conjugate fibers touch each other and adjacent absorbent fibers.

A particularly preferred nonwoven fabric is a laminate comprising a core of a mixture of short-length natural cellulose fibers and staple length polyester/polyethylene conjugate fibers, and a light weight veneer of heat-fusible fibers on each surface of the core. The composite web is passed through a through-air heater to fuse the lower melting component of the conjugate fibers while maintaining the fibrous integrity of these fibers, and to fuse or soften the surfaces of the heat-fusible fibers in the two outer veneers. As the material emerges from the heater and cools, the fused surfaces of the lower melting component of the conjugate fibers, i.e., the polyethylene, solidify, and bonds form where these surfaces touch each other and other fibers.

The thermal-bonded, nonwoven fabrics particularly useful in the practice of the present invention employ polyester/polyethylene conjugate fibers wherein at least 50 percent of the surface of the individual fibers is polyethylene. Most preferred are sheath/core fibers with the polyethylene as the sheath and the polyester as the core. The fibers will usually have a denier within the range of about 1 to 6, (0.11 to 0.67

Tex) and a length within the range of from 1.27 to 7.62 or 10.16 cm (1/2 inch to 3 or 4 inches).

Absorbent fibers employed in such thermal-bonded, nonwoven fabrics include rayon staple fibers, cotton fibers, short length natural cellulose fibers such as wood pulp fibers and cotton linters, and mixtures thereof.

Heat-fusible fibers used in the veneer of the nonwoven fabric are preferably staple length conjugate fibers. However, if desired, other types of heat-fusible fibers such as polypropylene homofil fibers can be used in the veneer. The veneer can also contain other fibers, such as rayon, cotton, or polyester staple fibers.

The above bonded nonwoven fabrics normally have basis weights from 17 to 204 gm⁻² (1/2 to 6 ounces per square yard). The bulk density of the fabrics is usually below 0.15 gram per cubic centimeter, preferably below 0.09 gram per cubic centimeter, e.g., from 0.02 to 0.09 gram per cubic centimeter, and more preferably, from 0.025 to 0.06 gram per cubic centimeter. The fabrics preferably have an absorbent capacity, as measured by a Gravimetric Absorbency Tester, of at least 600 percent and preferably at least 1400 percent, exclusive of any nonabsorbent layer such as a veneer of 100 percent fusible fibers.

The process of preparing adhesive strip bandages from a continuous roll of bonded, nonwoven fabric bandage material will be better understood by reference to FIGURES 1 through 8. In FIGURE 1, the center portion of nonwoven fabric from roll 10 is lapped into a Z-fold by plows 11a and 11b and passes through nip rolls 12 and 13. The cross section of the fabric leaving the nip rolls with Z-fold 25 running down the length of the fabric is illustrated in FIGURE 2. The folded fabric next passes between hot calendering rolls 14 and 15 where the edges 26 and 27 of the Z-folded portion are secured and the side widths 28 and 29 of fabric extending from the folded portion are compacted under pressure to form a thin, dense, sheet-like material. Roll 14 includes a bridging center section to avoid compacting the folded area of the fabric. The cross section of the resulting compacted product is illustrated in FIGURE 3.

The compacted material next passes through the adhesive application station where a pressure-sensitive, skin-compatible adhesive is applied from reservoirs 16 and 17 to the compacted side portions of the material, the adhesive coating being designated as 30 and 31. FIGURE 4 is a view in cross section of the adhesive-coated material. The adhesive may be any pressure-sensitive, medical grade adhesive suitable for use in adhesive bandages, and is preferably a hypoallergenic hot melt adhesive. Emulsion adhesives may also be used provided the adhesive application station includes means for drying the adhesive after application.

As the adhesive-coated material continues through the process, the adhesive coating and the central folded area are covered by release papers 32 and 33 fed from rolls 18 and 19 respectively. The release papers preferably overlap along the

center of the web over the folded area. FIGURE 5 is a view in cross section of the composite material after application of the release papers.

The composite material next passes through a cutting station where cutters 21 and 22 cut the material into transverse strips 23 to obtain the strip adhesive bandages. The cut strips are carried on conveyor belt 24 to a packaging station (not shown) where individual strips are packaged in sealed envelopes prior to sterilization. The cut strips 23 are further illustrated in cross section in FIGURE 6.

An individual strip bandage produced according to the present invention is illustrated in FIGURE 7 with the adhesive release papers removed. In the illustrated bandage, pad 25 is set in from the longitudinal edges of the bandage by areas 34 and 35 to form a well-defined pad portion. Areas 34 and 35 are produced by compacting and heat fusing the areas on either side of the pad when the bandage strips are cut from the composite material as heretofore described.

Additional bandage configurations other than the strip bandage which may be prepared utilizing the inventive concepts of the present invention include the square island bandage of FIGURE 8, and the circular island bandage of FIGURE 9. In each case, the bandage is prepared from a continuous length of nonwoven fabric which has been lapped in a Z-fold over the central area to provide a pad of triple layer thickness. Material extending from the folded edges of the pad is heat fused to form a dense, sheet-like material. Additionally, the folded area itself is heat fused over the area which is not to form part of the bandage pad. This is conveniently accomplished by passing the folded web through an embossing roll imprinted with the desired bandage configuration. In FIGURES 8 and 9, the original edges of the Z-fold are indicated at 40 and 41 and the heat fused areas of the Z-fold are indicated at 42 and 43.

The adhesive is preferably applied to the bandages of FIGURES 8 and 9 by transfer coating after which the adhesive covering release papers may be applied. The bandages are thereafter obtained from the composite material by die cutting according to the desired bandage configuration.

Another variation of a bandage made in accordance with the present invention is the butterfly bandage of FIGURE 10. In this bandage, the entire web including the central folded portion is heat calendered to form a dense, sheet-like material. The triple-ply center section has increased strength as desirable for this type of bandage. In FIGURE 10, the original edges of the central Z-fold are indicated 45 and 46. A suitable adhesive is applied to the entire bandage except for the center portion indicated generally as 47. The butterfly bandage is die cut from a continuous length of material after the adhesive and covering release papers have been applied as described above.

Other bandage configurations and con-

structions utilizing the inventive concepts of the present invention will be apparent to those skilled in the art, the principle feature of the present invention being the total construction of an adhesive bandage or pad utilizing only one component or raw material, preferably a continuous web comprising heat-fusible fibers. Bandage flexibility and bias characteristics can be modified by altering fiber type and orientation.

The bandage material can be further modified by incorporating fiber finishes to vary absorbency characteristics or by incorporating medicaments such as bacteriocides and antibiotics. The surface of the pad intended for placement against the wound may be heat glazed or otherwise surface modified to provide wound release characteristics without significantly affecting the bulk or absorbency of the pad.

Claims

1. An adhesive bandage constructed of a single piece of bandage material (10) and having a central pad portion (25) and outwardly extending, adhesive-coated portions (28, 29) comprising said material (10) compacted into a thin, sheet-like structure, characterised in that the central pad portion (25) comprises a folded, triple thickness of said bandage material (10) the folded edge portions of which are secured to said adhesive-coated portions (28, 29) whereby said pad portion (25) is restrained from unfolding.

2. The bandage of claim 1, in the form of a strip bandage wherein the adhesive-coated portions (28, 29) comprise a single thickness of said bandage material (10).

3. The bandage of claim 1, in the form of an island bandage wherein the adhesive-coated portions include portions (42, 43) which comprise a compacted triple-thickness of said bandage material (10).

4. The bandage of any one of claims 1 to 3, wherein said pad portion (25) is formed by a Z-fold in said bandage material (10).

5. The bandage of any one of claim 1 to 4, wherein said bandage material (10) comprises a heat-fusible, nonwoven fabric.

6. The bandage of claim 5, wherein said nonwoven fabric comprises a mixture of absorbent fibers with at least 10% heat-fusible fibers.

7. The bandage of claim 6, wherein said heat-fusible fibers are staple length polyester core/polyethylene sheath conjugate fibers.

8. The bandage of claim 5 wherein said nonwoven fabric comprises a core of a mixture of absorbent fibers and heat-fusible polyester/polyethylene conjugate fibers, and an outer veneer on both faces of said core comprising a nonwoven web of heat-fusible polyester/polyethylene conjugate fibers.

9. The bandage of claim 8, wherein the surface of said pad comprising a veneer of said heat-fusible fibers is heat glazed to impact nonsticking, wound release properties to said pad.

10. The bandage of any one of claims 1 to 9,

wherein said adhesive-coated portions are heat fused into said sheet-like structure.

11. A method for the continuous production of a plurality of adhesive bandages comprising the steps of:

a) compacting portions of a single piece of bandage material (10) around a central portion thereof to produce thin, sheet-like portions (28, 29) extending outwardly from a central pad portion (25);

b) applying an adhesive coating to the surface of said compacted sheet-like portions (28, 29);

c) covering said adhesive-coated portions (28, 29) with release paper (32, 33); and

d) cutting said bandage material to form individual bandages (23) comprising a central pad portion (25) and adhesive-coated portions (28, 29) extending outwardly therefrom,

characterised in that

prior to said compacting step (a) the bandage material (10) is continuously lapped into a Z-fold (25) whereby a central portion of triple thickness extending down the length of said bandage material (10) and having single thickness portions (28, 29) extending therefrom is formed; and

the folded edges (26, 27) of said central portion are secured to said single thickness portions (28, 29) to restrain said central portion from unfolding.

12. The method of claim 11, wherein during said compacting step (a) only said single thickness portions are compacted whereby a plurality of strip bandages is formed.

13. The method of claim 11, wherein during said compacting step (a) areas (42, 43) of said central portion and the single thickness portions are compacted whereby a plurality of island bandages is formed.

Patentansprüche

1. Ein Klebeverband, der aus einem einzigen Stück von Verbandmaterial (10) aufgebaut ist und der einen mittleren Kissen teil (25) und sich nach außen erstreckende, mit Kleber überzogene Teile (28, 29) aufweist, bei welchen letzteren Teilen das genannte Material (10) zu einer dünnen, blattartigen Struktur verdichtet worden ist, dadurch gekennzeichnet, daß der mittlere Kissen teil (26) eine gefaltete Dreifachlagendicke des genannten Verbandsmaterials (10) umfaßt, wobei die gefalteten Randteile dieses Kissen teiles an den genannten, mit Kleber beschichteten Teilen (28, 29) befestigt sind, wodurch der genannte Kissen teil (25) daran gehindert wird, sich auseinanderzufalten.

2. Der Verband nach Anspruch 1, in der Form eines Verbandstreifens, bei welchem die mit Kleber beschichteten Teile (28, 29) eine Einfachlagendicke des genannten Verbandsmaterials (10) umfassen.

3. Der Verband nach Anspruch 1, in der Form eines Inselverbandes, bei welchem die mit Kleber beschichteten Teile (42, 43) umfassen, welche eine verdichtete Dreifachlagendicke des genannten Verbandsmaterials (10) darstellen.

4. Der Verband nach einem der Ansprüche 1 bis

structions utilizing the inventive concepts of the present invention will be apparent to those skilled in the art, the principle feature of the present invention being the total construction of an adhesive bandage or pad utilizing only one component or raw material, preferably a continuous web comprising heat-fusible fibers. Bandage flexibility and bias characteristics can be modified by altering fiber type and orientation.

The bandage material can be further modified by incorporating fiber finishes to vary absorbency characteristics or by incorporating medicaments such as bacteriocides and antibiotics. The surface of the pad intended for placement against the wound may be heat glazed or otherwise surface modified to provide wound release characteristics without significantly affecting the bulk or absorbency of the pad.

Claims

1. An adhesive bandage constructed of a single piece of bandage material (10) and having a central pad portion (25) and outwardly extending, adhesive-coated portions (28, 29) comprising said material (10) compacted into a thin, sheet-like structure, characterised in that the central pad portion (25) comprises a folded, triple thickness of said bandage material (10) the folded edge portions of which are secured to said adhesive-coated portions (28, 29) whereby said pad portion (25) is restrained from unfolding.

2. The bandage of claim 1, in the form of a strip bandage wherein the adhesive-coated portions (28, 29) comprise a single thickness of said bandage material (10).

3. The bandage of claim 1, in the form of an island bandage wherein the adhesive-coated portions include portions (42, 43) which comprise a compacted triple-thickness of said bandage material (10).

4. The bandage of any one of claims 1 to 3, wherein said pad portion (25) is formed by a Z-fold in said bandage material (10).

5. The bandage of any one of claim 1 to 4, wherein said bandage material (10) comprises a heat-fusible, nonwoven fabric.

6. The bandage of claim 5, wherein said nonwoven fabric comprises a mixture of absorbent fibers with at least 10% heat-fusible fibers.

7. The bandage of claim 6, wherein said heat-fusible fibers are staple length polyester core/polyethylene sheath conjugate fibers.

8. The bandage of claim 5 wherein said nonwoven fabric comprises a core of a mixture of absorbent fibers and heat-fusible polyester/polyethylene conjugate fibers, and an outer veneer on both faces of said core comprising a nonwoven web of heat-fusible polyester/polyethylene conjugate fibers.

9. The bandage of claim 8, wherein the surface of said pad comprising a veneer of said heat-fusible fibers is heat glazed to impact nonsticking, wound release properties to said pad.

10. The bandage of any one of claims 1 to 9,

wherein said adhesive-coated portions are heat fused into said sheet-like structure.

11. A method for the continuous production of a plurality of adhesive bandages comprising the steps of:

a) compacting portions of a single piece of bandage material (10) around a central portion thereof to produce thin, sheet-like portions (28, 29) extending outwardly from a central pad portion (25);

b) applying an adhesive coating to the surface of said compacted sheet-like portions (28, 29);

c) covering said adhesive-coated portions (28, 29) with release paper (32, 33); and

d) cutting said bandage material to form individual bandages (23) comprising a central pad portion (25) and adhesive-coated portions (28, 29) extending outwardly therefrom,

characterised in that

prior to said compacting step (a) the bandage material (10) is continuously lapped into a Z-fold (25) whereby a central portion of triple thickness extending down the length of said bandage material (10) and having single thickness portions (28, 29) extending therefrom is formed; and

the folded edges (26, 27) of said central portion are secured to said single thickness portions (28, 29) to restrain said central portion from unfolding.

12. The method of claim 11, wherein during said compacting step (a) only said single thickness portions are compacted whereby a plurality of strip bandages is formed.

13. The method of claim 11, wherein during said compacting step (a) areas (42, 43) of said central portion and the single thickness portions are compacted whereby a plurality of island bandages is formed.

Patentansprüche

1. Ein Klebeverband, der aus einem einzigen Stück von Verbandmaterial (10) aufgebaut ist und der einen mittleren Kissen teil (25) und sich nach außen erstreckende, mit Kleber überzogene Teile (28, 29) aufweist, bei welchen letzteren Teilen das genannte Material (10) zu einer dünnen, blattartigen Struktur verdichtet worden ist, dadurch gekennzeichnet, daß der mittlere Kissen teil (26) eine gefaltete Dreifachlagendicke des genannten Verbandsmaterials (10) umfaßt, wobei die gefalteten Randteile dieses Kissen teiles an den genannten, mit Kleber beschichteten Teilen (28, 29) befestigt sind, wodurch der genannte Kissen teil (25) daran gehindert wird, sich auseinanderzufalten.

2. Der Verband nach Anspruch 1, in der Form eines Verbandstreifens, bei welchem die mit Kleber beschichteten Teile (28, 29) eine Einfachlagendicke des genannten Verbandsmaterials (10) umfassen.

3. Der Verband nach Anspruch 1, in der Form eines Inselverbandes, bei welchem die mit Kleber beschichteten Teile (42, 43) umfassen, welche eine verdichtete Dreifachlagendicke des genannten Verbandsmaterials (10) darstellen.

4. Der Verband nach einem der Ansprüche 1 bis



3, bei welchem der genannte Kissenteil (25) durch eine Z-Faltung in dem genannten Verbandsmaterial (10) ausgebildet ist.

5. Der Verband nach einem der Ansprüche 1 bis 4, bei welchem das genannte Verbandsmaterial (10) einen unter Wärmeeinwirkung schmelzbaren Faservliesstoff umfaßt.

6. Der Verband nach Anspruch 5, bei welchem der genannte Faservliesstoff ein Gemisch von absorbierenden Fasern mit wenigstens 10% unter Wärmeeinwirkung schmelzbaren Fasern enthält.

7. Der Verband nach Anspruch 6, bei welchem die genannten, unter Wärmeeinwirkung schmelzbaren Fasern konjugierte Fasern mit einem Polyesterkern/Polyethylenmantel von Stapelfaserlänge sind.

8. Der Verband nach Anspruch 5, bei welchem der genannte Faservliesstoff einen Kern aus einem Gemisch von absorbierenden Fasern und unter Wärmeeinwirkung schmelzbaren konjugierten Polyester/Polyethylen-Fasern und eine äußere Deckschicht auf beiden Seiten des genannten Kerns umfaßt, welche Deckschicht einen Faservliesstoff aus konjugierten, unter Wärmeeinwirkung schmelzbaren Polyester/Polyethylen-Fasern enthält.

9. Der Verband nach Anspruch 8, bei welchem die Oberfläche des genannten Kissens eine Deckschicht aus den genannten, unter Wärmeeinwirkung schmelzbaren Fasern enthält und unter Wärmeeinwirkung satiniert worden ist, um dem genannten Kissen nicht klebende bzw. Wundablösungseigenschaften zu verleihen.

10. Der Verband nach einem der Ansprüche 1 bis 9, bei welchem die genannten, mit Kleber beschichteten Teile unter Bildung der genannten, blattartigen Struktur unter Wärmeeinwirkung geschmolzen worden sind.

11. Verfahren zur kontinuierlichen Erzeugung einer Mehrzahl von Klebeverbänden, welches die folgenden Stufen umfaßt:

(a) Verdichten von Teilen eines aus einem einzigen Stück bestehenden Verbandsmaterials (10) rund um einen Mittelteil des Verbandsmaterials herum, um dünne, blattartige Teile (28, 29) zu erzeugen, welche sich nach außen, von einem mittleren Kissenteil (25) weg, erstrecken;

(b) Auftragen einer Kleberbeschichtung auf die Oberfläche der genannten verdichteten, blattartigen Teile (28, 29);

(c) Abdecken der genannten, mit Kleber beschichteten Teile (28, 29) mit Ablösepapier (32, 33); und

(d) Zerschneiden des genannten Verbandsmaterials unter Bildung von Einzelverbänden (23), welche einen mittleren Kissenteil (25) und sich nach außen erstreckende mit Kleber beschichtete Teile (28, 29) umfassen,

dadurch gekennzeichnet, daß vor der genannten Verdichtungsstufe (a) das Verbandsmaterial (10) unter Ausbildung einer Z-Faltung (25) kontinuierlich sich überlappend angeordnet wird, wodurch ein Mittelteil von Dreifachlagendicke gebildet wird, der sich über die gesamte Länge des genannten Verbandsmaterials (10) erstreckt.

und von welchem Mittelteil sich Einfachlagendicke aufweisende Teile (28, 29) weg erstrecken; und

daß die gefalteten Ränder (26, 27) des genannten Mittelteiles an den genannten Teilen (28, 29) mit Einfachlagendicke befestigt werden, um zu verhindern, daß sich der genannte Mittelteil auseinanderfaltet.

12. Verfahren nach Anspruch 11, bei welchem während der genannten Verdichtungsstufe (a) nur die genannten Teile mit Einfachlagendicke verdichtet werden, wodurch eine Mehrzahl von streifenförmigen Verbänden gebildet wird.

13. Verfahren nach Anspruch 11, bei welchem während der genannten Verdichtungsstufe (a) Bereiche (42, 43) des genannten Mittelteils und die Teile von Einfachlagendicke verdichtet werden, wodurch eine Mehrzahl von Inselverbänden gebildet wird.

Revendications

1. Pansement adhésif constitué d'une pièce unique de matière de pansement (10) et comprenant une région de tampon centrale (25) et, s'étendant vers l'extérieur, des régions enduites d'adhésif (28, 29) comprenant cette matière (10) comprimée en une structure mince en forme de feuille, caractérisé en ce que la région de tampon centrale (25) comprend une épaisseur pliée triple de la matière de pansement (10) dont les bords pliés sont fixés sur les régions enduites d'adhésif (28, 29), de façon que la région de tampon (25) soit empêchée de se déplier.

2. Pansement suivant la revendication 1, sous la forme d'un pansement en bande, dans lequel les régions enduites d'adhésif (28, 29) comprennent une épaisseur unique de la matière de pansement (10).

3. Pansement suivant la revendication 1, sous la forme d'un pansement à flot, dans lequel les régions enduites d'adhésif comportent des parties (42, 43) qui comprennent une épaisseur comprimée triple de la matière de pansement (10).

4. Pansement suivant l'une quelconque des revendications 1 à 3, dans lequel la région de tampon (25) est formée par un pli en Z dans la matière de pansement (10).

5. Pansement suivant l'une quelconque des revendications 1 à 4, dans lequel la matière de pansement (10) comprend une étoffe non tissée fusible à chaud.

6. Pansement suivant la revendication 5, dans lequel l'étoffe non tissée comprend un mélange de fibres absorbantes avec au moins 10% de fibres fusibles à chaud.

7. Pansement suivant la revendication 6, dans lequel les fibres fusibles à chaud sont des fibres conjuguées en longueurs coupées à âme de polyester et gaine de polyéthylène.

8. Pansement suivant la revendication 5, dans lequel l'étoffe non tissée comprend une âme d'un mélange de fibres absorbantes et de fibres conjuguées fusibles à chaud de polyester/polyéthylène, outre un parement extérieur, sur les deux faces de



l'âme, comprenant une nappe non tissée de fibres conjuguées fusibles à chaud de polyester/polyéthylène.

9. Pansement suivant la revendication 8, dans lequel la surface du tampon comprenant un parement extérieur de ces fibres fusibles à chaud est glacée à chaud pour conférer au tampon les propriétés de ne pas coller à la plaie et de s'en dégager.

10. Tampon suivant l'une quelconque des revendications 1 à 9, dans lequel les régions enduites d'adhésif sont fondues à chaud dans la structure en forme de feuille.

11. Procédé pour la production continue de plusieurs pansements adhésifs, comprenant les stades:

a) de comprimer des régions d'une pièce unique de matière de pansement (10) autour d'une partie centrale de celle-ci pour former de minces régions en forme de feuilles (28, 29) s'étendant vers l'extérieur à partir d'une région de tampon centrale (25);

b) d'appliquer un enduit d'adhésif sur la surface des régions comprimées en forme de feuilles (28, 29);

c) de recouvrir les régions enduites d'adhésif (28, 29) d'un papier antiadhésif (32, 33), et

d) de découper la matière de pansement pour en former des pansements distincts (23) comprenant une région de tampon centrale (25) et des régions enduites d'adhésif (28, 29) s'étendant vers l'extérieur à partir de celle-ci,

caractérisé en ce que

avant le stade de compression (a), la matière de pansement (10) est repliée de façon continue en un pli en Z, (25), de manière qu'il se forme une région centrale en triple épaisseur s'étendant sur la longueur de la matière de pansement (10) et comportant des régions en simple épaisseur (28, 29) s'étendant à partir de celle-ci, et

les bords pliés (26, 27) de la région centrale sont fixés aux régions en simple épaisseur (28, 29) pour empêcher la région centrale de se déplier.

12. Procédé suivant la revendication 11, dans lequel, pendant le stade de compression (a), seules les régions en simple épaisseur sont comprimées de manière à former plusieurs pansements en bandes.

13. Procédé suivant la revendication 11, dans lequel, pendant le stade de compression (a), des parties (42, 43) de la région centrale et des régions en simple épaisseur sont comprimées de façon à former plusieurs pansements à îlots.

