

**Search query (6):** [SP]: hydroentangled elastic film-based, stretch-bonded composites and methods of making same a stretch-bonded elastic nonwoven composite includes a machine-direction elastic apertured film-based, stretch-bonded laminate layer that has been hydroentangled throughout all of its laminate layers with a hydrophilic fibrous layer. the elastic apertured film-based, stretch-bonded laminate layer includes a middle elastic film layer positioned between one or two inelastic layers, each of which layers includes hydrophilic fibers from the hydrophilic fibrous layer.

**Results:** 14

## 1) Family number: 59608734 (US2016332418A)

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**Title:** HYDROENTANGLED ELASTIC FILM-BASED, STRETCH-BONDED COMPOSITES AND METHODS OF MAKING SAME

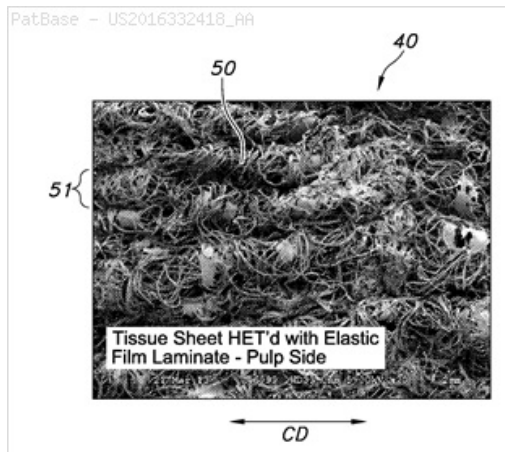
**Abstract:** Source: US2016332418A A stretch-bonded elastic nonwoven composite includes a machine-direction elastic apertured film-based, stretch-bonded laminate layer that has been hydroentangled throughout all of its laminate layers with a hydrophilic fibrous layer. The elastic apertured film-based, stretch-bonded laminate layer includes a middle elastic film layer positioned between one or two inelastic layers, each of which layers includes hydrophilic fibers from the hydrophilic fibrous layer.

### Classifications:

**International (IPC 8-9):** B32B23/10 B32B27/12 B32B27/32 B32B3/26 B32B37/00 B32B37/10 B32B38/00 B32B5/02 B32B5/06 B32B5/26 B32B7/02 B32B7/08 D04H1/56 D04H1/58 (Advanced/Invention)

**CPC:** B32B2307/73 B32B3/266 B32B7/08 D04H1/56 D04H1/58 B32B37/10 B32B38/0012 B32B2250/40 B32B2307/516 B32B2307/718 D10B2201/00 D10B2509/026 D10B2321/022 D10B2201/20 B32B5/06 B32B5/022 B32B5/26 B32B27/12 B32B27/32 B32B2037/1072 B32B2038/0028 B32B2262/0253 B32B2262/04 B32B2262/062 B32B2307/51 B32B2307/728 B32B2432/00 B32B2535/00 B32B2555/00

**US:** 428/138



### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AU2014368995 AA    | 20150625         | AU20140368995      | 20141219         |
| CO20160000057 A2   | 20161110         | CO20160000057      | 20160719         |
| EP3083247 A1       | 20161026         | EP20140871346      | 20141219         |
| KR101696588 B1     | 20170113         | KR20167019392      | 20141219         |
| KR20160094445 A    | 20160809         | KR20167019392      | 20141219         |
| MX2016007531 A1    | 20160913         | MX20160007531      | 20141219         |
| US2016332418 AA    | 20161117         | US20140105545      | 20141219         |
| WO15095731 A1      | 20150625         | WO2014US71546      | 20141219         |

### Priority:

US20130919475P 20131220 US20140105545 20141219 WO2014US71546 20141219

**Probable Assignee:** KIMBERLY CLARK CO

**Assignee(s):** (std): KIMBERLY CLARK CO ; KIMBERLY CLARK CORP

**Assignee(s):** KIMBERLY CLARK WORLDWIDE INC

**Inventor(s):** (std): BAKER JOSEPH K ; JENKINS SHAWN E ; JOSEPH K BAKER ; SHAWN E JENKINS

**Agent(s):** MADDERNS PATENT AND TRADE MARK ATTORNEYS; SPRUSON AND FERGUSON; JAMES IAN RAISBECK LLINAS; DAVIES CHRISTOPHER ROBERT; FLACK STEVEN D ET AL

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

## 2) Family number: 59608741 (US2016319470A)

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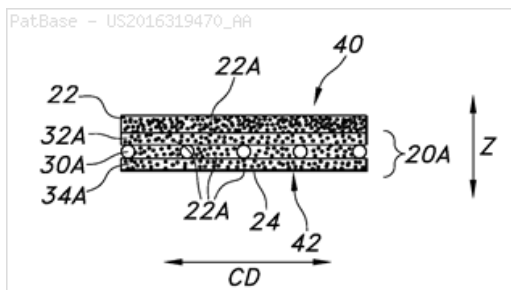
**Title:** HYDROENTANGLED ELASTIC FILAMENT-BASED, STRETCH-BONDED COMPOSITES AND METHODS OF MAKING SAME

**Abstract:** Source: US2016319470A A stretch-bonded elastic nonwoven composite that is absorbent to both water and oil includes a machine-direction, elastic filament-based, stretch-bonded laminate layer and a hydrophilic fibrous layer that is hydroentangled with all layers of the elastic filament-based, stretch-bonded laminate layer. The laminate layer includes a middle elastic filament-based layer sandwiched between two inelastic nonwoven layers.

### Classifications:

**International (IPC 8-9):** B32B23/10 B32B37/00 B32B5/02 B32B5/04 B32B5/06 B32B5/26 B32B7/02 D04H1/425 D04H1/4374 D04H1/492 D04H1/498 D04H13/00 (Advanced/Invention)

**CPC:** B32B5/08 B32B5/22 B32B2262/0223 B32B2262/0253 B32B2262/0261 B32B2262/0276 B32B2262/065 B32B2262/067 B32B2262/14 D04H1/425 D04H1/4374 B32B5/022 B32B5/04 B32B5/06 B32B5/26 B32B7/02 B32B2250/20 B32B2262/02 B32B2262/04 B32B2262/062 B32B2307/51 B32B2307/726



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AU2014369013 AA    | 20150625         | AU20140369013      | 20141219         |
| CO20160000056 A2   | 20161031         | CO20160000056      | 20160719         |
| EP3084057 A1       | 20161026         | EP20140871909      | 20141219         |
| KR101703486 B1     | 20170206         | KR20167019379      | 20141219         |
| KR20160094444 A    | 20160809         | KR20167019379      | 20141219         |
| MX2016007516 A1    | 20160913         | MX20160007516      | 20141219         |
| US2016319470 AA    | 20161103         | US20140105542      | 20141219         |
| WO15095749 A1      | 20150625         | WO2014US71580      | 20141219         |

**Priority:**

US20130919534P 20131220      US20140105542 20141219      WO2014US71580 20141219  
WO2014US71546 20141219

**Probable Assignee:** KIMBERLY CLARK CO

**Assignee(s):** (std): KIMBERLY CLARK CO ; KIMBERLY CLARK CORP

**Assignee(s):** KIMBERLY CLARK WORLDWIDE INC

**Inventor(s):** (std): BAKER JOSEPH K ; JENKINS SHAWN E ; JOSEPH K BAKER ; SHAWN E JENKINS

**Agent(s):** MADDERNS PATENT AND TRADE MARK ATTORNEYS; SPRUSON AND FERGUSON; JAMES IAN RAISBECK  
LLINAS; DAVIES CHRISTOPHER ROBERT; FLACK STEVEN D ET AL

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR  
CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID  
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SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

**3) Family number: 11353483 (US5853881A)**

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**Title:** ELASTIC LAMINATES WITH IMPROVED HYSTERESIS

**Abstract:** Source: US5853881A A composite elastic material is provided having improved hysteresis comprising a layer of an elastic material bonded to a layer of nonelastic material at least one side. The elastic material layer is made from a blend of a narrow polydispersity number polymer and a conventional elastomer, and the blend is essentially free of low molecular weight polyethylene processing aids. The composite elastic material laminate should have a hysteresis at least 15 percent better than a similar laminate made without the narrow polydispersity number elastomer but with the processing aid.

**Classifications:**

**International (IPC 8-9):** B32B37/14 B32B5/02 D04H13/00

D04H5/00 (Advanced/Invention);

B32B5/02 (Advanced/Non-invention);

B32B37/14 B32B5/02 D04H13/00 D04H5/00 (Core/Invention)

**International (IPC 1-7):** A61F13/15 B29C41/08 B32B31/00 B32B5/02

B32B7/00 C08J5/12 D02G3/00 D04H13/00 D04H5/00

**CPC:** Y10S428/903 B32B37/144 B32B5/02 Y10T428/2929

Y10T442/601 Y10T442/602 Y10T442/66 D04H1/559 B32B5/06

B32B5/18 B32B5/245 B32B5/26 B32B7/02 B32B7/08 B32B7/12

B32B27/065 B32B27/08 B32B27/302 B32B27/306 B32B27/32

B32B27/327 B32B27/34 B32B27/36 B32B27/40 B32B2262/02

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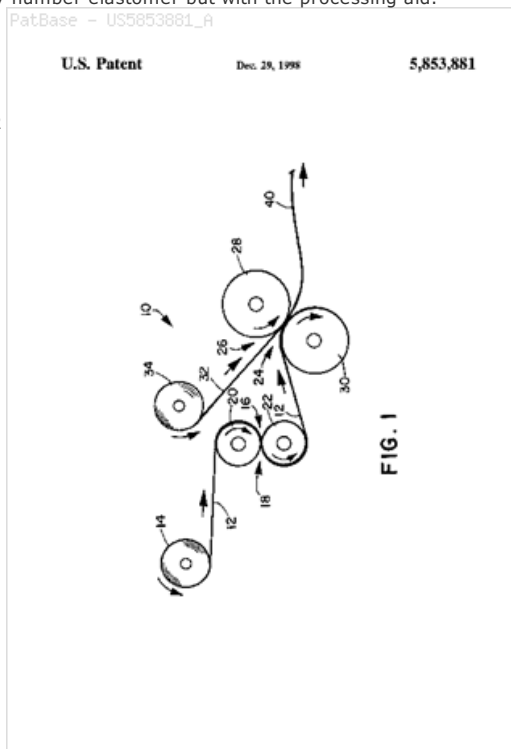
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B32B2556/00 B32B2571/00 B32B5/00 B32B27/00 B32B27/12

**European:** B32B31/00J B32B37/14B B32B5/02 D04H13/00B5

**US:** 428/373 428/903 442/328 442/329 442/382



**Family:**

| Publication number | Publication date | Application number | Application date |
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| AR011249 AA     | 20000816 | AR1997P104672  | 19971009 |
| AU199742490 A1  | 19980511 | AU19970042490  | 19970904 |
| AU712783 B2     | 19991118 | AU19970042490  | 19970904 |
| BRPI9712229 A   | 19990831 | BR1997PI12229  | 19970904 |
| CA2264669 AA    | 19990224 | CA19972264669  | 19970904 |
| CA2264669 C     | 20061121 | CA19972264669  | 19970904 |
| CN1096933 C     | 20021225 | CN19971098735  | 19970904 |
| CN1233209 A     | 19991027 | CN19971098735  | 19970904 |
| CO5040243 A1    | 20010529 | CO19970056945  | 19970930 |
| DE69727147 D1   | 20040212 | DE19976027147  | 19970904 |
| DE69727147 T2   | 20041125 | DE19976027147T | 19970904 |
| EP0930967 A1    | 19990728 | EP19970940792  | 19970904 |
| EP0930967 B1    | 20040107 | EP19970940792  | 19970904 |
| IN2054MA1997 A  | 20060630 | IN1997MA02054  | 19970916 |
| IN204503 B      | 20080328 | IN1997MA02054  | 19970916 |
| KR100451880 B1  | 20041008 | KR19997003110  | 19990410 |
| KR20000049041 A | 20000725 | KR19997003110  | 19990410 |
| TH28135 A       | 19980227 | TH19971003743  | 19970916 |
| US5853881 A     | 19981229 | US19960728712  | 19961011 |
| WO9816379 A1    | 19980423 | WO1997US15539  | 19970904 |

#### Priority:

US19960728712 19961011 WO1997US15539 19970904

**Probable Assignee:** KIMBERLY CLARK WORLDWIDE INC

**Assignee(s):** (std): KIMBERLY CLARK CO

**Assignee(s):** KIMBERLY CLARK CORP ; KIMBERLY CLARK WORLDWIDE INC ; SHAWVER SUSAN ELAINE ; TINSLEY JON EDWARD ; SMITH STEPHEN CLARK ; ESTEY PAUL WINDSOR ; HAFFNER WILLIAM BELA

**Inventor(s):** (std): HAFFNER BELA ; HAFFNER W B ; HAFFNER WILLIAM BELA ; HAFFNER WILLIAM BELLA ; ESTEY P W ; ESTEY PAUL WINDSOR ; ESTEY WINDSOR ; SMITH CLARK ; SMITH STEPHEN CLARK ; TINSLEY EDWARD ; TINSLEY J E ; TINSLEY JON EDWARD ; SHAWVER ELAINE ; SHAWVER SUSAN ELAINE

**Inventor(s):** Smith ; W B HAFFNER ; WB HAFFNER ; William ; WILLIAM BELA HAFFNER ; WILLIAM BELLA HAFFNER ; Stephen Clark ; STEPHEN CLARK SMITH ; SUSAN ELAINE SHAWVER ; Haffner ; J E TINSLEY ; JE TINSLEY ; JON EDWARD TINSLEY ; P W ESTEY ; PAUL WINDSOR ESTEY ; PW ESTEY

**Agent(s):** SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; BORDEN LADNER GERVAIS LLP; RAMIRO CASTRO DUQUE

**Designated states:** AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CZ DE DK EE ES FI FR GA GB GE GH GR HU IE IL IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TG TJ TM TR TT UA UG UZ VN YU ZW

#### 4) Family number: 2782354 (US4935287A)

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**Title:** STRETCHABLE LAMINATE CONSTRUCTIONS

**Abstract:** Source: US4935287A Stretchable laminate constructions based on an elastic fabric and a substantially non-elastic film which are held in intimate contact with one another by means of a discontinuous pattern of adhesive are disclosed. When the laminate constructions of the invention are in a relaxed state, the length of the film between adjacent adhesion points along the direction of stretch of the elastic fabric is substantially equivalent to the length of the elastic fabric between the same adhesion points when the construction is extended to its elastic recovery limit. A preferred embodiment of the invention utilizes waterproof breathable non-elastic membranes to produce laminate constructions suitable for clean room and protective garment applications.

#### Classifications:

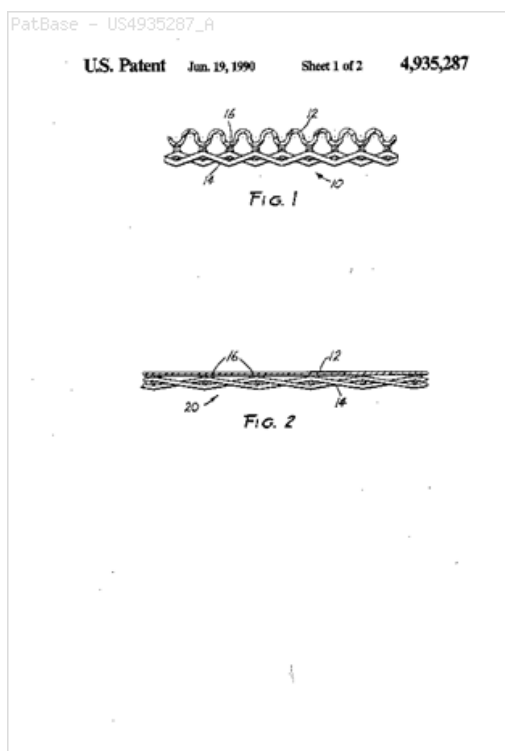
**International (IPC 8-9):** A41D31/00 B32B27/12 B32B3/26 B32B37/14 B32B38/00 B32B5/04 B32B7/02 B32B7/14 D06N3/00 D06N3/04 D06N3/14 D06N7/00 (Advanced/Invention); A41D31/00 B32B27/12 B32B3/26 B32B37/14 B32B38/00 B32B5/04 B32B7/02 B32B7/14 D06N3/00 D06N3/12 D06N7/00 (Core/Invention)

**International (IPC 1-7):** A41D31/02 B32B27/12 B32B27/14 B32B3/26 B32B31/12 B32B31/16 B32B7/02 B32B7/14 D06N7/00

**CPC:** Y10T428/24446 Y10T428/24826 B32B37/144 B32B5/04 B32B37/1292 D06N3/045 D06N3/14 A41D31/02 A41D2400/22 D06N7/0092 D06N2203/042 D06N2203/068 D06N2209/105 D06N2209/123 D06N2209/128 D06N2209/141 D06N2209/142 D06N2211/10 D06N3/0029

**European:** A41D31/00C2 B32B31/00A8B3B B32B31/00J B32B37/12D2 B32B37/14B B32B5/04 D06N3/00B8G D06N3/04D D06N3/14 D06N7/00

**US:** 428/152 428/198 428/224 428/226 428/246 428/252 428/253



#### Family:

| Publication number | Publication date | Application number | Application date |
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| CA2022057 AA       | 19910301         | CA19902022057      | 19900726         |
| EP0415758 A2       | 19910306         | EP19900309500      | 19900830         |
| EP0415758 A3       | 19910904         | EP19900309500      | 19900830         |
| JP3090352 A2       | 19910416         | JP19900227882      | 19900829         |
| US4935287 A        | 19900619         | US19890400516      | 19890830         |

**Priority:**

CA19902022057 19900726 US19890400516 19890830

**Probable Assignee:** MINNESOTA MINING AND MFG

**Assignee(s):** (std): MINNESOTA MINING AND MFG

**Assignee(s):** MINNESOTA MINING AND MFG CO ; MINNESOTA MINING AND MFG CO 3M ; MINNESOTA MINING AND MFG CO It 3M gt ; BURLEIGH MALCOLM B ; JOHNSON BRIAN D ; MINNESOTA MINING AND MANUFACTURING COMPANY

**Inventor(s):** (std): BURAIAN DENISU JIYONSON ; BURLEIGH MALCOLM B ; BURLEIGH MALCOLM B MINNESOTA M ; JOHNSON BRIAN D ; JOHNSON BRIAN D MINNESOTA MINI ; MARUKOMU BURUUSU BAAREIGU

**Inventor(s):** JOHNSON BRIAN D MINNESOTA MINING AND ; BURLEIGH MALCOLM B MINNESOTA MINING AND

**Agent(s):** SMART AND BIGGAR

**Designated states:** DE FR GB IT

**5) Family number: 29120504 (US4939016A)**

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**Title:** HYDRAULICALLY ENTANGLED NONWOVEN ELASTOMERIC WEB AND METHOD OF FORMING THE SAME

**Abstract:** Source: US4939016A A composite nonwoven elastomeric web material, and method of forming such material, as well as a nonwoven elastomeric web material and method of forming such material, are disclosed. The composite web material is provided by hydraulically entangling a laminate of at least (1) a layer of meltblown fibers; and (2) at least one further layer, preferably of at least one of pulp fibers, staple fibers, meltblown fibers, and continuous filaments, with or without particulate material, with at least one of the layer of meltblown fibers and the further layer being elastic so as to form an elastic web material after hydraulic entanglement. The nonwoven elastomeric web material is provided by hydraulically entangling a layer of meltblown elastomeric fibers. The material formed can be cloth-like with smooth surfaces, and with isotropic elasticity and strength. Different texture properties, including a corrugated stretchable fabric, can be provided by pre-stretching and then hydraulically entangling while stretched.

**Classifications:**

**International (IPC 8-9):** D04H1/42 D04H1/46 D04H1/56 D04H3/10 D06N7/04 (Advanced/Invention);

D04H1/42 (Advanced/Non-invention);

D04H1/42 D04H1/46 D04H1/56 D04H3/08 (Core/Invention)

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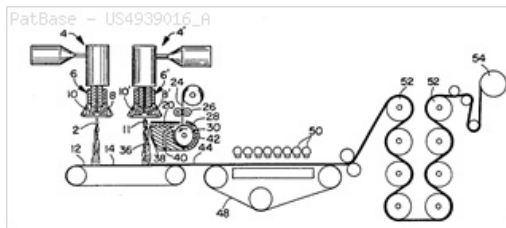
**CPC:** Y10S428/903 Y10S428/913 Y10T428/24446 Y10T428/24694

Y10T428/253 Y10T428/254 Y10T442/602 D04H1/492 D04H1/56

**European:** D04H1/46B D04H1/56B

**US:** 28/104 428/152 428/182 428/283 428/284 428/297 428/298

428/299 428/326 428/327 428/903 428/913 442/329



**Family:**

| Publication number | Publication date | Application number | Application date |
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| AT114747 E         | 19941215         | AT19890104802T     | 19890317         |
| AU198931465 A1     | 19890921         | AU19890031465      | 19890317         |
| AU611270 B2        | 19910606         | AU19890031465      | 19890317         |
| CA1308242 A1       | 19921006         | CA19890593501      | 19890313         |
| DE68919492 D1      | 19950112         | DE19896019492      | 19890317         |
| DE68919492 T2      | 19950504         | DE19896019492T     | 19890317         |
| EP0333212 A2       | 19890920         | EP19890104802      | 19890317         |
| EP0333212 A3       | 19900425         | EP19890104802      | 19890317         |
| EP0333212 B1       | 19941130         | EP19890104802      | 19890317         |
| ES2064376 T3       | 19950201         | ES19890104802T     | 19890317         |
| JP2026973 A2       | 19900129         | JP19890065827      | 19890317         |
| JP3014051 B2       | 20000228         | JP19890065827      | 19890317         |
| KR970005851 B1     | 19970421         | KR19890003408      | 19890317         |
| MX169382 B         | 19930630         | MX19890015310      | 19890316         |
| US4939016 A        | 19900703         | US19880170209      | 19880318         |

**Priority:**

CA19890593501 19890313 US19880170209 19880318

**Probable Assignee:** KIMBERLY CLARK WORLDWIDE INC

**Assignee(s):** (std): KIMBERLY CLARK CO

**Assignee(s):** KIMBERLY CLARK CORP ; KIMBERLY CLARK CORP NEENAH WIS US ; KIMBERLY CLARK WORLDWIDE INC ; SMITH ROLAND C ; KIMMITT DEBORAH A ; RADWANSKI FRED R ; TRIMBLE LLOYD E ; EVERHART CHERIE H ; KIMBERLY CLARK A CORP OF DE CORP

**Inventor(s):** (std): CHERIE H EVERHART ; CHERIE HARTMAN EVERHART ; CHERIE EICHI EUAHAATO ; CHERIE EICHI EBUAHAATO ; DEBORA EI KIMITSUTO ; DEBORAH A KIMMITT ; EVERHART CHERIE H ; EVERHART CHERIE HARTMAN ; FRED R RADWANSKI ; FURETSUDO AARU RADOWANSUKII ; KIMMITT DEBORAH A ; ROIDO II TORINBURU ; ROLAND C SMITH ; ROORANDO SHII SUMISU ; SMITH ROLAND C ; LLOYD E TRIMBLE ; RADWANSKI FRED R ; TRIMBLE LLOYD E

**Inventor(s):** TRIMBLE LLOYD E DUSTIN OKLAHOMA 74839 US ; RADWANSKI FRED R NORCROSS GEORGIA 30092 US ; SMITH ROLAND C GAINESVILLE GEORGIA 30501 US ; KIMMITT DEBORAH A DEMAREST GEORGIA 30535 US ; EVERHART CHERIE H ALPHARETTA GEORGIA 30201 US

**Agent(s):** SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; BORDEN LADNER GERVAIS LLP

**Designated states:** AT BE CH DE ES FR GB GR IT LI LU NL SE

**Title:** SOFT AND BULKY COMPOSITE FABRICS

**Abstract:** Source: US2005136776A A composite fabric is provided that contains staple fibers hydraulically entangled with a nonwoven web formed from continuous filaments. A portion of the staple fibers is entangled with the web, while another portion protrudes through the web. The resulting surface topography has one surface with a preponderance of the smooth, staple fibers, and another surface with a preponderance of the continuous filaments from the nonwoven web, but also including some of the protruded smooth, staple fibers. Thus, each surface contains smooth staple fibers and is soft.

**Classifications:**

**International (IPC 8-9):** A47L13/16 A47L13/17 D04H1/00 D04H1/44 D04H1/46 D04H13/00 D04H3/00 D04H3/16 D04H5/00 D04H5/02 (Advanced/Invention);

D04H1/00 D04H13/00 (Advanced/Non-invention);  
D04H (Subclass/Invention)

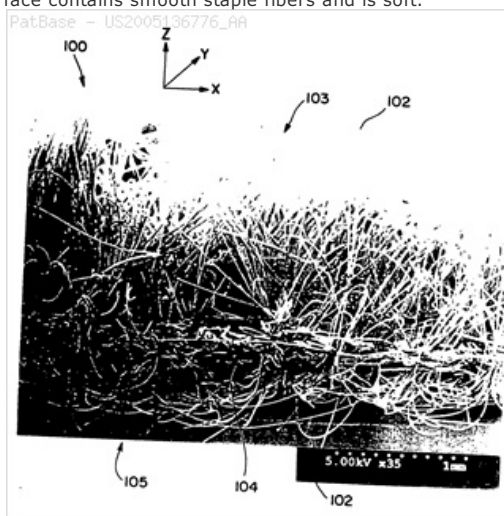
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**CPC:** Y10T442/619 Y10T442/681 Y10T442/689 Y10T442/697

D04H3/14 D04H1/498

**European:** D04H13/00B3B

**US:** 28/104 442/344 442/344S 442/401 442/401S 442/408 442/408P 442/415 442/415S



**Family:**

| Publication number | Publication date | Application number | Application date |
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| AU2004313826 AA    | 20050728         | AU20040313826      | 20040610         |
| AU2004313826 BB    | 20100513         | AU20040313826      | 20040610         |
| BRPI0418001 A      | 20070417         | BR2004PI18001      | 20040610         |
| BRPI0418001 B1     | 20161004         | BR2004PI18001      | 20040610         |
| CA2547730 AA       | 20060530         | CA20042547730      | 20040610         |
| CA2547730 C        | 20120131         | CA20042547730      | 20040610         |
| CN1898430 A        | 20070117         | CN200480038556     | 20040610         |
| CN1898430 B        | 20121205         | CN200480038556     | 20040610         |
| CR8415 A           | 20070911         | CR20060008415      | 20060522         |
| DE602004020805 D1  | 20090604         | DE200460020805T    | 20040610         |
| EP1706527 A1       | 20061004         | EP20040755187      | 20040610         |
| EP1706527 B1       | 20090422         | EP20040755187      | 20040610         |
| IL175548 A0        | 20060905         | IL20060175548      | 20060510         |
| IL175548 A1        | 20100531         | IL20040175548      | 20040610         |
| JP2007516363 T2    | 20070621         | JP20060546945T     | 20040610         |
| KR101084890 B1     | 20111117         | KR20067012438      | 20040610         |
| KR20060115901 A    | 20061110         | KR20067012438      | 20040610         |
| MXPA06007186 A1    | 20060823         | MX2006PA07186      | 20040610         |
| RU2006122605 A     | 20080127         | RU20060122605      | 20040610         |
| RU2366768 C2       | 20090910         | RU20060122605      | 20040610         |
| US2005136776 AA    | 20050623         | US20030744606      | 20031223         |
| US7194788 BB       | 20070327         | US20030744606      | 20031223         |
| WO05068702 A1      | 20050728         | WO2004US18873      | 20040610         |
| ZA200604055 A      | 20070926         | ZA20060004055      | 20040610         |

**Priority:**

US20030744606 20031223 WO2004US18873 20040610

**Probable Assignee:** KIMBERLY CLARK WORLDWIDE INC

**Assignee(s):** (std): CLARK JAMES W ; DETAMORE JAMES J ; JENKINS SHAWN ; KIMBERLY CLARK CO ; SKOOG HENRY

**Assignee(s):** KIMBERLY CLARK WORLDWIDE INC ; KIMBERLEY CLARK WORLDWIDE INC ; KIMBERLI KLARK VORLVAJD INK

**Inventor(s):** (std): DZHENKINS SHON ; HENRY SKOOG ; JAMES J DETAMORE ; JAMES W CLARK ; JENKINS SHAWN ; JENKINS SHAWN E ; JENKINS SHAWN ERIC ; KLARK DZHEJMS V ; CLARK JAMES W ; CLARK JAMES WILLIAM ; CRAIG F THOMASCHEFSKY ; LARRY M BROWN ; SHAWN CLARK JAMES W SKOOG HENR ; DETAMORE JAMES J ; DITAMUR DZHEJMS DZH ; SHAWN JENKINS ; SKOOG HENRY ; SKUG GENRI

**Inventor(s):** CLARK JAMES ; SHAWN E JENKINS ; DETAMORE JAMES ; CLARK JAMES W SKOOG HENRY DETAMORE JAMES J JENKINS

**Agent(s):** FREEHILLS PATENT ATTORNEYS; FREEHILLS PATENT ATTORNEY S; FREEHILLS PATENT AND TRADE MARK ATTORNEYS; HERBERT SMITH FREEHILLS; SPRUSON AND FERGUSON; BORDEN LADNER GERVAIS LLP; DAVIES CHRISTOPHER ROBERT; REINHOLD COHN AND PARTNERS; DORITY AND MANNING PA

**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

**Title:** STRETCH BONDED LAMINATE INCLUDING AN ELASTIC MEMBER CONTAINING AN ADHESIVE COMPOSITION

**Abstract:** Source: US2007135008A Elastic composite laminates are disclosed. The laminates include an elastic member bonded to at least one facing material. In accordance with the present disclosure, an adhesive composition is coextruded with an elastomeric material to form the elastic member. In this manner, the elastic member can be bonded to the facing material in a stretched state without having to apply a separate adhesive layer between the two materials. In one embodiment, the elastic member can be bonded to the facing material according to a pattern that includes bonded areas and non-bonded areas.

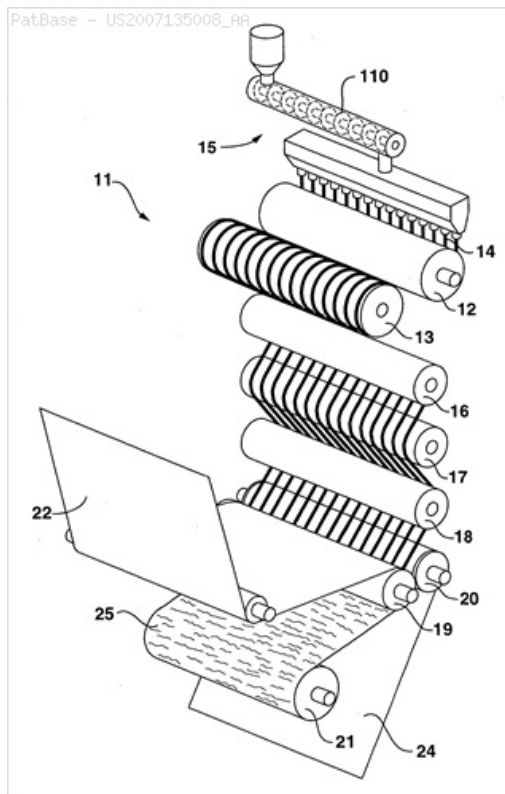
**Classifications:**

**International (IPC 8-9):** B32B25/08 B32B27/06 B32B27/12 B32B27/30 B32B37/00 B32B37/14 B32B5/04 B32B5/26 B32B7/14 C08L25/10 C09J123/12 C09J153/00 (Advanced/Invention); C09J123/12 (Advanced/Non-invention); B32B25/00 B32B27/12 B32B27/30 B32B37/00 B32B37/14 B32B5/04 B32B5/22 B32B7/14 C08L25/00 C09J123/00 (Core/Invention); C09J123/00 (Core/Non-invention)

**CPC:** C08L23/06 B32B5/04 B32B7/14 B32B25/08 B32B27/12 B32B27/30 B32B37/12 B32B37/14 B32B2305/20 B32B2307/51 C08L23/02 C08L23/0815 C08L23/0853 C08L23/0869 C08L23/10 C08L23/18 C08L25/10 C08L53/00 C08L53/02 C08L2205/02 C08L2205/03 C08L2207/14 C08L2314/06 C09J153/00 C09J153/02 Y10T428/24802 Y10T428/2481 Y10T442/30 Y10T442/601 Y10T442/602 Y10T442/643 Y10T442/66 Y10T442/674 Y10T442/68 Y10T442/681 Y10T442/682 D01F1/10 D01F6/42 D01F6/70

**European:** B32B25/08 B32B27/12 B32B27/30 B32B37/14B B32B5/04 B32B7/14 C08L23/02 C08L23/06 C08L23/08A1 C08L23/10 C08L23/18 C08L25/10 C08L53/00 C08L53/02 C09J153/00 C09J153/02 L32B305/20 L32B307/510 L32B37/12 M08L205/02 M08L205/03 M08L207/14 M08L23/02 M08L23/08C1 M08L23/08C3 M08L23/10 M08L314/06 M08L53/02

**US:** 156/160 156/160S 156/161 156/161S 428/195.1 428/196 442/181 442/181P 442/328 442/329 442/366 442/366S 442/382 442/382S 442/394 442/394S 442/400 442/400S 442/401 442/402 442/402S



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AU2006325510 AA    | 20070621         | AU20060325510      | 20060630         |
| AU2006325510 BB    | 20120315         | AU20060325510      | 20060630         |
| BRPI0618772 A2     | 20110913         | BR2006PI18772      | 20060630         |
| DE602006041015 D1  | 20140522         | DE200660041015T    | 20060630         |
| EP1960190 A1       | 20080827         | EP20060774405      | 20060630         |
| EP1960190 B1       | 20140409         | EP20060774405      | 20060630         |
| KR101399797 B1     | 20140618         | KR20087014205      | 20060630         |
| KR20080073744 A    | 20080811         | KR20087014205      | 20060630         |
| US2007135008 AA    | 20070614         | US20050302990      | 20051214         |
| US8153238 BB       | 20120410         | US20050302990      | 20051214         |
| WO07070101 A1      | 20070621         | WO2006US25779      | 20060630         |

**Priority:**

EP20060774405 20060630 US20050302990 20051214 WO2006US25779 20060630

**Probable Assignee:** KIMBERLY CLARK WORLDWIDE INC

**Assignee(s):** (std): HALL GREGORY K ; KIMBERLY CLARK CO ; KIMBERLY CLARK CORP ; WIDEMAN DANIEL ; VERCAUTEREN THOMAS ; ZHOU PEIGUANG ; ZHANG XIAOMIN

**Assignee(s):** KIMBERLY CLARK WORLDWIDE INC ; KIMBERLY CLARK WORLDWIDE INC NEENAH

**Inventor(s):** (std): ZHOU PEIGUANG ; ZHANG XIAOMIN ; WIDEMAN DANIEL ; VERCAUTEREN THOMAS ; HALL GREGORY K

**Inventor(s):** HALL GREGORY K MENASHA ; VERCAUTEREN THOMAS GREENVILLE ; WIDEMAN DANIEL MENASHA ; ZHANG XIAOMIN APPLETON ; DANIEL WIDEMAN ; GREGORY K HALL ; HALL GREGORY ; PEIGUANG ZHOU ; THOMAS VERCAUTEREN ; XIAOMIN ZHANG ; ZHOU PEIGUANG APPLETON

**Agent(s):** FREEHILLS PATENT AND TRADE MARK ATTORNEYS; SPRUSON AND FERGUSON; FREEHILLS PATENT ATTORNEYS; HERBERT SMITH FREEHILLS; FREEHILLS PATENT ATTORNEY S; ZIMMERMANN AND PARTNER PATENTANWALTE MBB; DAVIES CHRISTOPHER ROBERT; HOFFMANN BENJAMIN; DORITY AND MANNING PA

**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

**Title:** HYDROENTANGLED ELASTIC NONWOVEN SHEET

**Abstract:** Source: US2007141926A A method for making an elastic fabric with the steps of providing a hydroentangled

precursor fabric having at least 1 percent by weight of binder fibers, heating the precursor fabric to a temperature above the melting point of the binder fibers and then drawing the precursor fabric in the machine direction at a ratio sufficient to reduce the width by more than 20 percent and at a strain rate of 10 to 800 percent per minute to produce an elastic fabric having a cross-directional extensibility of about 100 percent up to 500 percent and a 30-95 percent recovery under a 50 percent extension.

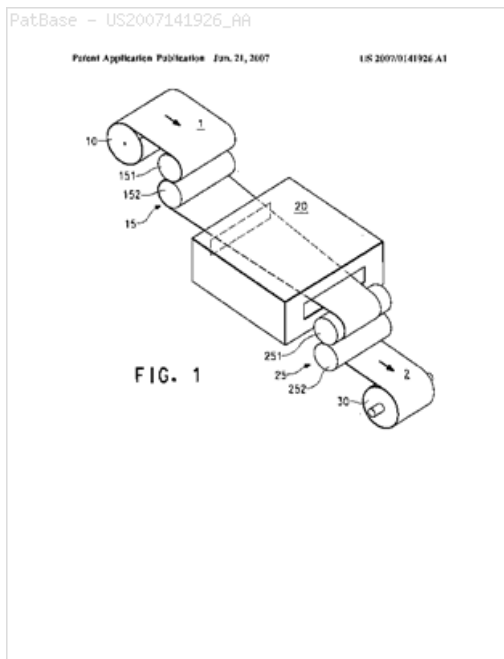
#### Classifications:

**International (IPC 8-9):** D01F8/04 D01F8/06 D01F8/14 D04H1/00 D04H3/00 D04H3/10 D06C3/00 (Advanced/Invention); D04H1/00 D04H3/00 (Core/Invention)

**CPC:** Y10T156/10 D06C3/00 B29C55/06 D04H1/00 D04H1/54 Y10T442/102 Y10T442/184 Y10T442/601 Y10T442/697 D04H1/49 D04H3/11

**European:** B29C55/06 D04H1/00 D04H1/46B D04H1/54 D04H3/10B D06C3/00

**US:** 156/60 156/60S 264/288.4 264/288.400S 442/2 442/2P 442/328 442/328S 442/415 442/415S 442/50 442/50S



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| CN101331258 A      | 20081224         | CN200680047053     | 20061214         |
| EP1974080 A2       | 20081001         | EP20060848622      | 20061214         |
| JP2009520123 T2    | 20090521         | JP20080545799T     | 20061214         |
| US2007141926 AA    | 20070621         | US20060638977      | 20061214         |
| WO07070624 A2      | 20070621         | WO2006US47670      | 20061214         |
| WO07070624 A3      | 20070816         | WO2006US47670      | 20061214         |

#### Priority:

US20050751070P 20051215 US20060638977 20061214 WO2006US47670 20061214

**Probable Assignee:** E I DU PONT DE NEMOURS AND CO

**Assignee(s):** (std): BENIM THOMAS E ; BENIM THOMAS EDWARD ; DU PONT ; TSAI DE SHENG ; EIDU PONT DE NEMOURS AND CO

**Assignee(s):** E I DU PONT DE NEMOURS AND CO ; E I DU PONT DE NEMOURS AND COMPANY ; E I DU PONT DE NEMOURS AND CO

**Inventor(s):** (std): BENIM THOMAS E ; BENIM THOMAS EDWARD ; TSAI DE SHENG

**Inventor(s):** BENIM THOMAS

**Agent(s):** MATTHEWS DEREK PETER ET AL; INO SARI; KURASAWA ICHIRO; MATSUSHITA MITSURU; DESHIMARU TAKESHI; KUMAKURA YOSHIO; E I DU PONT DE NEMOURS AND COMPANY, LEGAL PATENT RECORDS CENTER; E I DU PONT DE NEMOURS AND CO LEGAL PATENT RECORDS CENTER

**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

#### 9) Family number: 3810626 (US4775579A)

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**Title:** HYDROENTANGLED ELASTIC AND NONELASTIC FILAMENTS

**Abstract:** Source: US4775579A An elastic nonwoven fabric is made up of staple textile fibers or wood pulp, or both hydroentangled with an elastic web or net of a thermoplastic elastic polymer.

#### Classifications:

**International (IPC 8-9):** B32B5/04 B32B5/08 D04H1/04 D04H1/42 D04H1/44 D04H1/46 D04H1/492 D04H1/56 D04H13/00 D04H5/02 (Advanced/Invention);

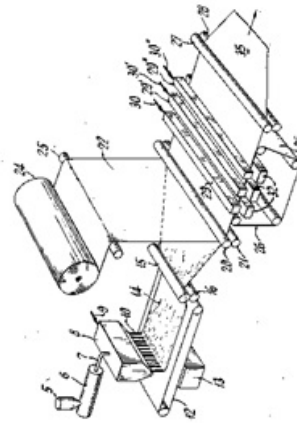
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**International (IPC 1-7):** B32B5/06 B32B5/08 D04H1/04 D04H1/42 D04H1/44 D04H1/46 D04H5/02

**CPC:** Y10S428/903 Y10T428/24322 Y10T442/602 Y10T442/689 Y10T442/698 D04H1/56 D04H1/425 D04H1/4291 D04H1/492 B32B5/04

**European:** B32B5/04 D04H1/56B D04H13/00B3

**US:** 28/104 428/137 428/219 428/284 428/299 428/903 442/329 442/408 442/416

**Family:**

| Publication number | Publication date | Application number | Application date |
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| AT105598 E         | 19940515         | AT19880402706T     | 19881027         |
| CA1290928 A1       | 19911022         | CA19880580429      | 19881018         |
| DE3889522 D1       | 19940616         | DE19883889522      | 19881027         |
| DE3889522 T2       | 19941222         | DE19883889522T     | 19881027         |
| EP0315507 A2       | 19890510         | EP19880402706      | 19881027         |
| EP0315507 A3       | 19900530         | EP19880402706      | 19881027         |
| EP0315507 B1       | 19940511         | EP19880402706      | 19881027         |
| ES2056117 T3       | 19941001         | ES19880402706T     | 19881027         |
| JP1148856 A2       | 19890612         | JP19880273373      | 19881031         |
| JP7000863 B4       | 19950111         | JP19880273373      | 19881031         |
| US4775579 A        | 19881004         | US19870117234      | 19871105         |

**Priority:**

CA19880580429 19881018 EP19880402706 19881027 US19870117234 19871105

**Probable Assignee:** FIBERWEB NORTH AMERICA INC

**Assignee(s):** (std): FIBERWEB NORTH AMERICA INC ; JAMES RIVER CORP ; MUSU RIBAA CORP OBU BUAAJINIA

**Assignee(s):** J MUSU RIBAA CORP OBU BUAAJINIA ; JAMES RIVER OF VIRGINIA CORP ; HAGY M DEXTER ; JAMES RIVER OF VIRGINIA TREDEGAR STREET BOX 2218 RICHMOND VIRGINIA A CORP OF VA CORP ; FIBERWEB NORTH AMERICA INC 545 NORTH PLEASANTBURG DRIVE GREENVILLE SC 29607 A CORP OF DE ; FIBERWEB NORTH AMERICA INC SIMPSONVILLE S C ; FIBERWEB NORTH AMERICA INC SIMPSONVILLE S C US ; AUSTIN JARED A

**Inventor(s):** (std): EMU DEKUSUTAA HEIJII ; HAGY DEXTER ; AUSTIN JARED A ; HAGY M DEXTER ; JIEADO EI OOSUTEIN

**Inventor(s):** AUSTIN JARED A GREER SOUTH CAROLINA 29651 ; AUSTIN JARED A GREER SOUTH CAROLINA 29651 US ; HAGY DEXTER GREENVILLE SOUTH CAROLINA 29605 ; HAGY DEXTER GREENVILLE SOUTH CAROLINA 29605 US

**Agent(s):** GOWLING LAFLEUR HENDERSON LLP

**Designated states:** AT BE CH DE ES FR GB GR IT LI LU NL SE

**10) Family number: 41579410 (US2008095978A)**

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**Title:** NONWOVEN COMPOSITE CONTAINING AN APERTURED ELASTIC FILM

**Abstract:** Source: US2008095978A An elastic nonwoven composite that contains an elastic film laminated to one or more nonwoven web materials is provided. The composite is formed by passing the film through a nip to bond the film to the nonwoven web material(s). Concurrent with bond formation, apertures are also formed in the elastic film. The apertures are of a size sufficient to provide a desired level of texture, softness, hand feel, and/or aesthetic appeal to the composite without having a significant adverse effect on its elastic properties. Aperture and bond formation are accomplished in the present invention by selectively controlling certain parameters of the lamination process, such as film content, bonding pattern, degree of film tension, bonding conditions, etc.

**Classifications:**

**International (IPC 8-9):** A61F13/15 A61F13/49 A61F13/53 A61F13/56  
B29C65/00 B32B27/02 B32B27/08 B32B27/12 B32B27/20  
B32B27/32 B32B3/10 B32B3/24 B32B3/26 B32B37/14 B32B37/24  
B32B38/04 B32B5/26 D04H1/54 D04H13/00

D04H3/08 (Advanced/Invention);

B32B37/00 B32B38/00 (Advanced/Non-invention);

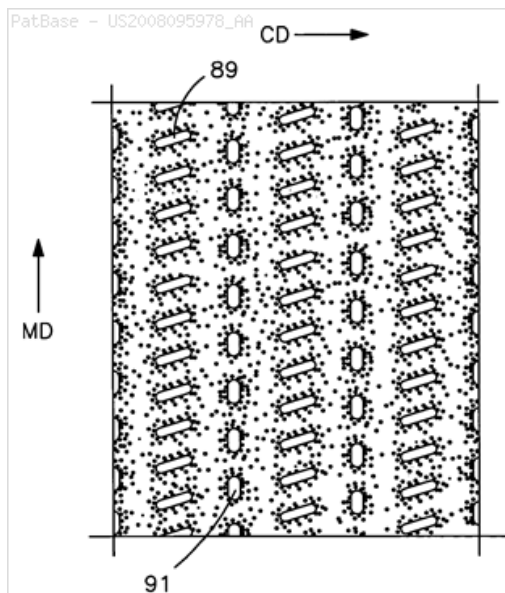
A61F13/15 A61F13/56 B29C65/00 B32B27/12 B32B3/10 B32B5/22

D04H13/00 D04H3/08 (Core/Invention)

**International (IPC 1-7):** B32B3/10 D04H13/00 D04H3/08

**CPC:** B32B37/24 A61F13/4902 B32B3/266 B32B5/26 B32B27/02

B32B27/08 B32B27/12 B32B27/20 B32B27/32 B32B37/0076  
 B32B37/144 B32B38/04 B32B2038/0028 B32B2038/047  
 B32B2305/20 B32B2307/51 D04H13/007 Y10T428/24273  
 Y10T428/24298 Y10T428/24314 Y10T428/24322 Y10T428/24331  
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**European:** A61F13/49D2H B32B27/02 B32B27/08 B32B27/12  
 B32B27/20 B32B27/32 B32B3/26B B32B37/14B B32B38/04  
 B32B5/26 D04H13/00B5 L32B305/20 L32B307/510 L32B37/00D  
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**US:** 156/160 156/181 156/181S 156/229 156/242 156/251 156/252  
 428/131 428/134 428/136 428/137 428/137P 428/138 442/394  
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 604/384 604/384S



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AR062608 AA        | 20081119         | AR2007P103863      | 20070830         |
| AU2007290942 AA    | 20080306         | AU20070290942      | 20070718         |
| AU2007290942 BB    | 20110908         | AU20070290942      | 20070718         |
| BRPI0715910 A2     | 20130326         | BR2007PI15910      | 20070718         |
| CN101511579 A      | 20090819         | CN200780032120     | 20070718         |
| CN101511579 B      | 20130814         | CN200780032120     | 20070718         |
| CN103434239 A      | 20131211         | CN201310299494     | 20070718         |
| CN103434239 B      | 20151118         | CN201310299494     | 20070718         |
| DE602007018299 D1  | 20120105         | DE200760018299T    | 20070718         |
| EP2064052 A2       | 20090603         | EP20070805196      | 20070718         |
| EP2064052 B1       | 20111026         | EP20070805196      | 20070718         |
| KR101386800 B1     | 20140421         | KR20097004160      | 20070718         |
| KR20090045293 A    | 20090507         | KR20097004160      | 20070718         |
| MX2009002160 A1    | 20090311         | MX20090002160      | 20070718         |
| RU2009111401 A     | 20101010         | RU20090111401      | 20070718         |
| RU2439223 C2       | 20120110         | RU20090111401      | 20070718         |
| US2008095978 AA    | 20080424         | US20060513497      | 20060831         |
| US2008132866 AA    | 20080605         | US20080029082      | 20080211         |
| US2013126070 AA    | 20130523         | US20130733987      | 20130104         |
| US7803244 BB       | 20100928         | US20060513497      | 20060831         |
| US8361913 BB       | 20130129         | US20080029082      | 20080211         |
| US9011625 BB       | 20150421         | US20130733987      | 20130104         |
| WO08026106 A2      | 20080306         | WO2007IB52873      | 20070718         |
| WO08026106 A3      | 20080703         | WO2007IB52873      | 20070718         |

#### Priority:

CN200780032120 20070718 EP20070805196 20070718 US20080029082 20080211  
 WO2007IB52873 20070718 US20060513497 20060831 US20130733987 20130104

**Probable Assignee:** KIMBERLY CLARK CO

**Assignee(s):** (std): KIMBERLY CLARK CO ; KIMBERLY CLARK CORP ; WELCH HOWARD M ; SIQUEIRA JOSE ; LATIMER MARGARET G ; NG WING CHAK ; MCCORMACK ANN L ; BROWN NORMAN

**Assignee(s):** KIMBERLI KLARK VORLDAVDJ INK ; KIMBERLY CLARK WORLDWIDE INC ; KIMBERLY CLARK WORLDWIDE INC NEENAH

**Inventor(s):** (std): BRAUN NORMAN ; BROWN NORMAN ; JOSE SIQUEIRA ; LATIMER MARGARET G ; LEHJTIMER MARGARET G ; MAKKORMAK EHNN L ; MCCORMACK ANN L ; NG WING CHAK ; NG WING CHAK ; NORMAN BROWN ; SIKEJRA KHOSE ; SIQUEIRA JOSE ; VEHLCH KHOVARD M ; WELCH HOWARD M ; WING CHAK NG

**Inventor(s):** ANN L MCCORMACK ; WELCH HOWARD M WOODSTOCK ; SIQUEIRA JOSE ROSWELL ; NG WING CHAK SUWANEE ; NG VING-CHAK ; MCCORMACK ANN L CUMMING ; NG ; MARGARET G LATIMER ; LATIMER MARGARET G ALPHARETTA ; BROWN NORMAN ROSWELL ; HOWARD M WELCH

**Agent(s):** FREEHILLS PATENT AND TRADE MARK ATTORNEYS; HERBERT SMITH FREEHILLS; SPRUSON AND FERGUSON; FREEHILLS PATENT ATTORNEYS; FREEHILLS PATENT ATTORNEY S; ZIMMERMANN AND PARTNER PATENTANWALTE MBB; DAVIES CHRISTOPHER ROBERT; DORITY AND MANNING PA; JOHNSTON JASON W

**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

**11) Family number: 42243767** (US2002016122A)

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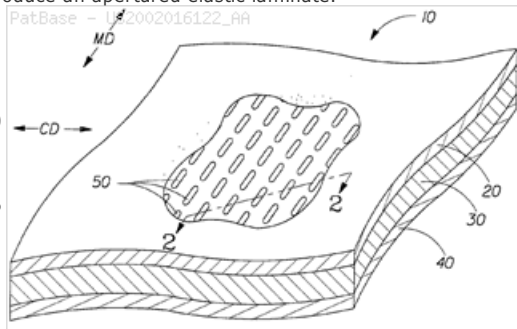
**Title:** ELASTIC LAMINATE WEB

**Abstract:** Source: US2002016122A An elastic laminate web is disclosed. The elastic laminate web can be non-apertured or

apertured, and comprises a first web, and a second web joined to the first web in a face to face relationship at a plurality of discrete bond sites having an aspect ratio of at least 2. The first and second webs form an interior region therebetween. An elastic material is disposed between the first and second webs. The elastic material is apertured in regions coincident the bond sites, such that the first and second webs are joined through the apertures. The laminate so produced can be stretched in a predetermined direction, such as by incremental stretching, to produce an apertured elastic laminate.

**Classifications:**

**International (IPC 8-9):** A47L1/15 A47L13/16 A47L13/17 A61F13/00 A61F13/15 A61F13/472 A61F13/49 A61F13/511 A61F13/512 A61F13/514 A61F13/53 A61F13/535 A61F13/539 A61F13/56 A61F5/44 A61F5/48 A61K8/00 A61K8/02 A61K8/73 A61Q1/00 A61Q1/02 A61Q15/00 A61Q17/04 A61Q19/00 A61Q19/02 A61Q19/10 A61Q5/12 A61Q90/00 B26F1/08 B26F1/20 B26F1/24 B29C31/00 B29C55/02 B29C55/18 B29C59/00 B29C59/04 B29C65/00 B29C65/02 B29C65/18 B29C65/74 B29C69/00 B29D31/00 B29D99/00 B29L31/48 B32B15/04 B32B25/10 B32B27/02 B32B27/06 B32B3/02 B32B3/06 B32B3/10 B32B3/24 B32B3/26 B32B37/00 B32B37/12 B32B37/14 B32B37/16 B32B37/30 B32B38/00 B32B38/04 B32B5/02 B32B5/04 B32B5/22 B32B5/24 B32B5/26 B32B7/02 B32B7/04 B65D33/36 B65D75/30 B65D75/58 C11D17/04 D04H1/54 D04H1/559 D04H13/00 D21H27/30 D21H27/32 H01B1/00 H01B7/08 (Advanced/Invention); A61F13/539 A61F5/44 A61K8/00 A61K8/02 A61Q1/00 A61Q19/00 A61Q19/10 B29C59/04 B29L31/48 B32B37/12 B32B38/00 B32B5/02 D04H1/54 (Advanced/Non-invention); A47L1/16 A61F13/15 A61F5/44 A61K8/00 A61K8/02 A61K8/72 A61Q1/00 A61Q1/02 A61Q15/00 A61Q17/04 A61Q19/00 A61Q19/02 A61Q19/10 A61Q5/12 A61Q90/00 B26F1/00 B29C55/18 B32B3/24 B32B38/04 B32B5/22 B32B7/04 C11D17/04 D04H13/00 (Core/Invention); B32B (Subclass/Invention); A61F (Subclass/Non-invention)



**International (IPC 1-7):** A22C13/00 A47L13/16 A47L13/17 A61F13/00 A61F13/15 A61F13/472 A61F13/49 A61F13/511 A61F13/514 A61F13/53 A61F5/44 A61F5/48 A61K7/00 A61K7/02 A61K7/32 A61K7/42 A61K7/50 B26F1/08 B29C31/00 B29D22/00 B29D23/00 B29D31/00 B31C1/00 B31D1/00 B32B1/08 B32B15/14 B32B23/02 B32B25/10 B32B27/02 B32B27/06 B32B27/12 B32B27/14 B32B3/00 B32B3/02 B32B3/06 B32B3/10 B32B3/24 B32B3/26 B32B31/00 B32B31/20 B32B5/00 B32B5/02 B32B5/04 B32B5/06 B32B5/18 B32B5/22 B32B5/24 B32B5/26 B32B7/02 B32B7/04 B32B9/00 B65D33/36 B65D75/30 B65D75/58 B65H81/00 D04H1/00 D04H1/54 D04H13/00 D04H3/00 D04H5/00 D21H27/30 D21H27/32 H01B1/00 H01B1/20 H01B1/22 H01B7/00 H01B7/02 H02G1/00

**CPC:** B29C47/0021 B29C47/003 B29C47/0057 B29C47/0064 B29C47/065 B29C69/00 A47L1/15 B29C55/023 B29C59/007 B29C59/04 B29C65/02 B29C65/18 B29C65/7437 B29C66/21 B29C66/436 B29C66/45 B29C66/4722 B29C66/83413 B29C66/83511 B29C2793/0045 B29K2105/0854 B29K2995/0068 B29L2009/00 B29L2031/4878 B29L2031/737 B29L2031/7374 B32B5/04 B32B15/04 B32B27/06 B32B37/12 B32B37/144 B32B38/0004 B32B38/0012 B32B2037/0092 B32B2038/0028 B32B2038/047 B32B2305/20 B32B2307/202 B32B2307/204 B32B2307/51 B65D75/30 H01B7/0838 A61F2013/51165 A61F2013/51182 A61F2013/51322 B32B2555/02 B65D75/58 A61F13/15707 A61F13/15756 A61F13/5146 A61F13/536 B29C66/83411 B32B37/0076 B32B2305/18 B29C66/81433 Y10T428/24298 Y10T428/24314 Y10T428/24322 Y10T428/24331 Y10T428/24562 Y10T428/24612 Y10T428/2481 Y10T428/24826 Y10T428/24851 Y10T428/24777 Y10T428/23 Y10T428/24802 Y10T428/234 Y10T428/237 Y10T428/24041 Y10T428/24273 Y10T428/24479 Y10T428/24942 B29C55/18 Y10T428/233 Y10T428/24496 Y10T428/1324 Y10T428/1362 Y10T428/239 Y10T428/2457 B29C66/727 B29C66/7294 B29C66/729 Y10T442/668 Y10T442/671 Y10T442/69 Y10T442/60 Y10T442/651 Y10T442/673 Y10T442/674 Y10T442/61 Y10T442/654 Y10T442/655 Y10T442/657 Y10T442/659 Y10T442/647 Y10T442/656 Y10T442/693 Y10T442/601 Y10T442/602 Y10T442/679 Y10T442/3472 Y10T442/637 Y10T442/2525 B29C66/71 B29C66/73921 B29C66/7392 B29C66/7394 B29C66/73941 B29C65/06 B29C65/08 Y10T428/249994 Y10T428/249995 Y10T428/249921 Y10T428/249924 Y10T428/249939 B29C66/73143 D04H1/425 D04H1/559 A61F13/51113 A61F13/511 A61F13/51394 A61F13/15593 A61F13/15699 A61F13/15731 A61F13/4902 A61F13/51104 A61F13/5123 A61F13/51464 A61F13/51476 A61F13/51478 A61F13/00 A61F13/51121 A61F13/5116 A61F13/513 C11D17/049 A47L13/17 A61F13/53 A61F13/537 A61F13/539 A61F2013/53782 A61F13/8405 A61K8/0208 A61Q19/00 A61Q19/10 B26F1/20 B26F1/24 B32B38/04 A61F13/512 B32B5/022 B32B5/08 B32B7/045 B32B7/12 B32B27/12 B32B27/32 B32B2262/0253 B32B2262/062 B32B2262/065 B32B2262/067 B32B2262/12 B32B2262/14 B32B2264/00 B32B2307/31 B32B2307/718 B32B2307/726 B32B2307/732 B32B2437/00 B32B2479/00 B32B2535/00 B32B3/266 B32B5/26 B32B7/04 B29C66/232 B29C66/234

**European:** A47L1/15 A47L13/17 A61F13/15M2B A61F13/15M5 A61F13/15M6 A61F13/15M6C A61F13/15M7 A61F13/49D2H A61F13/511A A61F13/511D A61F13/512 A61F13/512B A61F13/513 A61F13/514B1A A61F13/514B2 A61F13/514C1 A61F13/514C2 A61F13/53 A61F13/536 A61F13/537 A61F13/539 A61F13/84B A61K8/02C A61Q19/00 A61Q19/10 B26F1/20 B26F1/24 B29C55/02B B29C55/18 B29C59/00G B29C65/02 B29C65/18 B29C65/7437 B29C66/21 B29C66/4722 B29C66/83411 B29C66/83413 B29C69/00 B32B15/04 B32B27/06 B32B3/26B B32B37/00D B32B37/14B B32B38/00A B32B38/00C B32B38/04 B32B5/04 B32B5/26 B32B7/04 B65D75/30 B65D75/58 C11D17/04F D04H13/00B2 D04H13/00B5 H01B7/08E K61F13/494A1D K61F13/511E1 K61F13/511E5 K61F13/513D K61F13/537E4 L29C47/00J5 L29C47/00J9 L29C47/00L8 L29C59/04 L29C65/18 L29C66/45 L29C66/83511 L29C793/00E L29K105/08C L29K995/00F17 L29L31/48E2 L29L31/737 L29L31/7374 L29L9/00 L32B305/18 L32B305/20 L32B307/202 L32B307/204 L32B307/510 L32B37/00E L32B37/12 L32B38/00C8 L32B38/04C L32B55/02

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**Family:**

| Publication number | Publication date | Application number | Application date |
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**Priority:**

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**Designated states:** AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

**12) Family number: 42857199** (US2010196672A)

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**Title:** NON-WOVEN MATERIAL

**Abstract:** Source: US2010196672A A non-woven material is provided, comprising an external non-elastic base layer and an auxiliary layer comprising an elastic material, the base layer and auxiliary layer being mechanically bonded to one another.

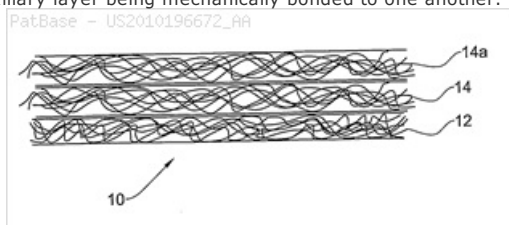
**Classifications:**

**International (IPC 8-9):** B32B3/00 B32B5/04 D04H13/00 D04H3/00 D04H3/10 D04H3/14 D04H3/16 (Advanced/Invention); B32B3/00 B32B5/04 D04H13/00 D04H3/00 D04H3/08 D04H3/14 D04H3/16 (Core/Invention)

**CPC:** B32B5/022 B32B5/06 B32B5/08 B32B2250/20 B32B2262/0253 B32B2307/3065 B32B2307/7145 B32B2307/728 B32B2555/02 B32B7/08 Y10T428/24628 Y10T442/601 D04H1/4374 D04H1/44 D04H1/498 B32B5/26

**European:** B32B7/08 D04H13/00B3

**US:** 264/103 28/100 428/174 442/328



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| CN101755083 A      | 20100623         | CN200880025199     | 20080720         |
| EP2171145 A1       | 20100407         | EP20080776637      | 20080720         |
| IL203391 A0        | 20101031         | IL20080203391      | 20080720         |
| US2010196672 AA    | 20100805         | US20080669725      | 20080720         |
| WO09010984 A1      | 20090122         | WO2008IL01006      | 20080720         |

**Priority:**

|                |          |               |          |               |          |
|----------------|----------|---------------|----------|---------------|----------|
| US20070929950P | 20070719 | US20080669725 | 20080720 | WO2008IL01006 | 20080720 |
|----------------|----------|---------------|----------|---------------|----------|

**Probable Assignee:** AVGOL IND 1953 LTD

**Assignee(s):** (std): AVGOL IND 1953 LTD ; BONNEH ACHAI

**Assignee(s):** AVGOL INDUSTRIES 1953 LTD  
**Inventor(s):** (std): ACHAI BONNEH ; BONNEH ACHAI  
**Agent(s):** MINOJA FABRIZIO; THE NATH LAW GROUP; NATH LAW GROUP; REINHOLD COHN AND PARTNERS  
**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

### 13) Family number: 44926226 (US2011253293A)

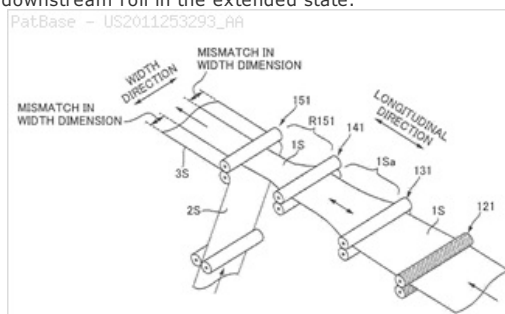
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**Title:** METHOD OF PRODUCING COMPOSITE SHEET, METHOD OF PRODUCING ABSORBENT ARTICLE USING COMPOSITE SHEET AND APPARATUS THAT PRODUCES COMPOSITE SHEET

**Abstract:** Source: US2011253293A A method of producing a composite sheet includes joining a first sheet in which stretchability in a longitudinal direction of the first sheet is developed by being subjected to a drawing process in the longitudinal direction and a second sheet having stretchability in a longitudinal direction of the second sheet that is lower than the stretchability of the first sheet. The longitudinal directions are aligned with each other. The first sheet is extended in the longitudinal direction, while transporting the first sheet in the longitudinal direction with the first sheet being in contact with an upstream roll and a downstream roll that rotate adjacent to each other. The second sheet is joined to a portion of the first sheet in an overlapped manner, the portion being in contact with the downstream roll in the extended state.

#### Classifications:

**International (IPC 8-9):** A61F13/15 A61F13/49 A61F13/514  
B32B37/02 B32B37/14 B32B37/20 B32B38/18 (Advanced/Invention);  
A61F13/15 A61F13/49 B32B37/02 B32B37/20  
B32B38/00 (Advanced/Non-invention);  
A61F13/15 B32B37/14 (Core/Invention)  
**International (IPC 1-7):** B32B37/20  
**CPC:** B32B37/144 B32B2038/0028 B32B2307/718 B32B2309/105  
B32B2309/14 B32B2555/02 B32B37/02 A61F13/15 A61F13/49  
B32B37/0053 B32B37/10 B32B37/20  
**European:** B32B37/14B L32B307/718 L32B309/10C L32B309/14  
L32B38/00C8 L32B555/02  
**US:** 1/1 156/164 156/495 156/4955



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AU2009304794 AA    | 20100422         | AU20090304794      | 20090910         |
| BRPI0914062 A2     | 20151103         | BR2009P114062      | 20090910         |
| CN102186673 A      | 20110914         | CN200980140850     | 20090910         |
| CN102186673 B      | 20140827         | CN200980140850     | 20090910         |
| DE602009037574 D1  | 20160519         | DE200960037574T    | 20090910         |
| EP2340935 A1       | 20110706         | EP20090820501      | 20090910         |
| EP2340935 A4       | 20130605         | EP20090820501      | 20090910         |
| EP2340935 B1       | 20160406         | EP20090820501      | 20090910         |
| IN01365KN2011 A    | 20110715         | IN2011KN01365      | 20110330         |
| JP2010094879 A2    | 20100430         | JP20080266716      | 20081015         |
| JP5452903 B2       | 20140326         | JP20080266716      | 20081015         |
| KR101639091 B1     | 20160712         | KR20117010808      | 20090910         |
| KR20110069171 A    | 20110622         | KR20117010808      | 20090910         |
| US2011253293 AA    | 20111020         | US20090124387      | 20090910         |
| US9067396 BB       | 20150630         | US20090124387      | 20090910         |
| WO10044323 A1      | 20100422         | WO2009JP65832      | 20090910         |

#### Priority:

EP20090820501 20090910 JP20080266716 20081015 WO2009JP65832 20090910

**Probable Assignee:** UNI CHARM CORP

**Assignee(s):** (std): ISHIKAWA SHINICHI ; NAKAMURA TAISHI ; UNI CHARM CORP ; UNI CHARM CORP JOINT STOCK CO OF JAPAN ; UNICHARM CORP

**Assignee(s):** UNI CHARM SHIKOKUCHUO SHI CORP ; UNI CHARM JOINT STOCK CO OF JAPAN CORP ; UNI CHARM CO LTD

**Inventor(s):** (std): ISHIKAWA SHINICHI ; NAKAMURA FUTOSHI ; NAKAMURA TAISHI ; SHINICHI ISHIKAWA ; TAISHI NAKAMURA

**Agent(s):** PHILLIPS ORMONDE FITZPATRICK; PATENTANWALTE STREHL SCHUEBEL HOPF AND PARTNER; EKE PHILIPPA DIANNE; DOLLEYMORES; ISSHIKI AND CO; LOWE HAUPTMAN AND HAM LLP

**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

### 14) Family number: 8354883 (US5324580A)

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**Title:** ELASTOMERIC MELTBLOWN WEBS

**Abstract:** Source: US5324580A The invention is directed to elastomeric meltblown webs having desirable strength and stretch/recovery properties which can be produced at relatively high throughputs and/or relatively low die pressures. The meltblown webs of the invention comprise a blend of (i) a fully hydrogenated diblock or triblock thermoplastic elastomer copolymer or mixtures thereof based on polystyrene and poly(ethylene-butylene) blocks; and (ii) from about 5 percent by weight up to about 50 percent by weight of a copolymer of ethylene and acrylic acid or ethylene and a lower alkyl ester of acrylic acid in which the ethylene content ranges from about 5 percent by weight up to about 50 percent by weight.

**Classifications:**

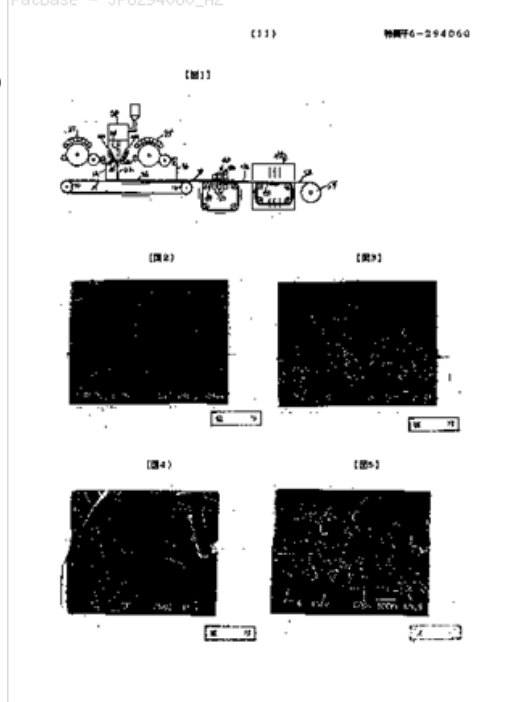
**International (IPC 8-9):** B32B5/08 D04H1/42 D04H1/48 D04H1/54 D04H1/56 D04H13/00 (Advanced/Invention); D04H1/42 D04H1/48 (Advanced/Non-invention); D04H1/42 D04H1/48 D04H1/54 D04H1/56 D04H13/00 (Core/Invention)  
**International (IPC 1-7):** B32B5/08 B32B5/22 D01F6/00 D04H1/04 D04H1/42 D04H1/48 D04H1/54 D04H1/56 D04H1/70 D04H11/08 D04H13/00 D04H3/16

**CPC:** Y10S428/903 Y10T428/253 Y10T428/2929 Y10T442/637 Y10T442/68 Y10T442/689 D04H1/56 D04H1/488 D04H1/492 D04H1/498 D04H1/559 D04H1/54

**European:** D04H1/54 D04H1/56B D04H13/00B3 D04H13/00B5

**US:** 156/167 28/104 428/284 428/296 428/297 428/298 428/299 428/326 428/373 428/903 442/361 442/400 442/408

PatBase - JP6294060\_R2

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AU199226002 A1     | 19930401         | AU19920026002      | 19920929         |
| BRPI9203820 A      | 19930420         | BR1992PI03820      | 19920930         |
| CA2079246 AA       | 19930331         | CA19922079246      | 19920928         |
| EP0534863 A1       | 19930331         | EP19920402646      | 19920928         |
| IL103278 A0        | 19930221         | IL19920103278      | 19920924         |
| JP6294060 A2       | 19941021         | JP19920285027      | 19920930         |
| MX9205621 A1       | 19930501         | MX19920005621      | 19920930         |
| US5324580 A        | 19940628         | US19920954277      | 19920930         |

**Priority:**

CA19922079246 19920928      US19910768831 19910930      US19920954277 19920930

**Probable Assignee:** FIBERWEB HOLDINGS LTD

**Assignee(s):** (std): FIBER UEBU NORTH AMERICA INC ; FIBERWEB NORTH AMERICA INC

**Assignee(s):** FIBERWEB SIMPSONVILLE INC ; FIBERWED NORTH AMERICA INC ; ZIMMERMAN GUY S JR ; NEWKIRK DAVID D ; GESSNER SCOTT L ; FIBERWEB HOLDINGS LTD ; ALLAN JOHN L ; AUSTIN JARED A ; BBA NONWOVENS SIMPSONVILLE INC

**Inventor(s):** (std): DEIBITSUDO DEII NIYUUKAAKU ; GAI ESU TSUIMAAMAN ; GESSNER SCOTT L ; ALLAN JOHN L ; AUSTIN JARED A ; JIYAADO EI OOSUTEIN ; JIYON ERU ARAN ; NEWKIRK DAVID D ; SUKOTSUTO ERU JIESUNAA ; ZIMMERMAN GUY S ; ZIMMERMAN GUY S JR

**Inventor(s):** SCOTT L GESSNER ; JOHN L ALLAN ; DAVID D NEWKIRK ; GUY S ZIMMERMAN ; GUY S ZIMMERMAN JR ; JARED A AUSTIN

**Agent(s):** WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; SIM AND MCBURNEY

**Designated states:** AT BE CH DE DK ES FR GB GR IT LI LU NL SE