

## Search history

- Search 1: TAC=(absorbent AND article AND (band OR barrier) AND (nonwoven OR non woven) AND (softness OR smoothness) AND (fiber OR FIBRE) AND polyolefin AND slip AND (additive OR agent) AND (wax OR erucamide) AND lubricant) (Results 0)
- Search 2: TAC=(absorbent AND article AND (band OR barrier) AND (nonwoven OR non woven) AND (softness OR smoothness) AND (fiber OR fibre) AND polyolefin AND slip AND (additive OR agent) AND (wax OR erucamide)) (Results 2)
- Search 3: TAC=(absorbent AND article AND (band OR barrier) AND (nonwoven OR non woven) AND (fiber OR fibre) AND polyolefin AND slip AND erucamide) (Results 2)
- Search 4: TAC=(absorbent AND article AND (band OR barrier) AND (fiber OR fibre) AND polyolefin AND slip ) (Results 9)

1) Family number: 31418010 (US2004258910A)

© PatBase

Title: WATER-DISPERSIBLE AND MULTICOMPONENT FIBERS FROM SULFOPOLYESTERS

**Abstract:** Disclosed are water-dispersible fibers derived from sulfopolyesters having a Tg of at least 25 degrees centigrade. The fibers may contain a single sulfopolyester or a blend of a sulfopolyester with a water-dispersible or water-nondispersible polymer. Also disclosed are multicomponent fibers comprising a water dispersible sulfopolyester having a Tg of at least 57 degrees centigrade and a water non-dispersible polymer. The multicomponent fibers may be used to produce microdenier fibers. Fibrous articles may be produced from the water-dispersible fibers, multicomponent fibers, and microdenier fibers. The fibrous articles include water-dispersible and microdenier nonwoven webs, fabrics, and multilayered articles such as wipes, gauze, tissue, diapers, panty liners, sanitary napkins, bandages, and surgical dressings. Also disclosed is a process for water-dispersible fibers, nonwoven fabrics, and microdenier webs. The fibers and fibrous articles have further applications in flushable personal care and cleaning products, disposable protective outerwear, and laminating binders.

## Classifications:

**International (IPC 8-9):** A41D13/12 A41D19/00 A41D27/12 A47C20/02 A47G9/08 A47K7/02 A61B19/08 A61F13/00 A61F13/15 A61F13/49 A61F13/53 A61F13/551 A61K47/32 A61K47/34 A61K8/02 A61K8/85 A61K8/89 A61K9/00 A61K9/70 A61L15/22 A61L15/44 A61L15/46 A61L9/04 A61P17/00 A61Q13/00 A61Q19/00 A61Q19/10 B01D39/06 B01D39/14 B01F17/00 B02C19/00 B08B1/00 B28B3/20 B29C47/00 B29C47/06 B32B1/02 B32B25/02 B32B25/10 B32B27/02 B32B29/00 B32B3/00 B32B5/02 B32B5/16 B42D15/00 C08G63/00 C08G63/68 C08G63/688 C08G75/24 C08L101/00 C08L67/02 C08L81/08 C11D17/00 C11D3/37 D01D10/00 D01D5/00 D01D5/08 D01D5/088 D01D5/098 D01D5/10 D01D5/12 D01D5/16 D01D5/30 D01D5/32 D01D5/34 D01D5/36 D01F1/00 D01F1/04 D01F1/09 D01F1/10 D01F6/00 D01F6/62 D01F6/84 D01F6/86 D01F6/92 D01F8/00 D01F8/04 D01F8/14 D01F9/00 D02G1/00 D02G1/02 D02G3/00 D02G3/02 D02G3/04 D02G3/22 D02G3/36 D02J1/22 D03D15/00 D03D15/06 D03D23/00 D04B1/16 D04H1/00 D04H1/20 D04H1/42 D04H1/43 D04H1/435 D04H1/4374 D04H1/4382 D04H1/4391 D04H1/46 D04H1/485 D04H1/492 D04H1/50 D04H1/56 D04H13/00 D04H3/00 D04H3/011 D04H3/016 D04H3/02 D04H3/10 D04H3/14 D04H3/147 D04H3/16 D04H5/00 D04H5/10 D04H5/30 D04H5/32 D06M11/00 D06M11/05 D21H13/10 D21H13/20 D21H13/24 D21H13/40 D21H15/10 F21V1/00 H01M2/16 (Advanced/Invention); D01D5/08 D01D5/34 D01F8/00 D01F8/14 D03D15/06 D04H1/42 D06M101/32 (Advanced/Non-invention); A61K8/72 A61Q19/00 B28B3/20 B29C47/00 C08G63/00 D01D5/08 D01D5/30 D01F6/00 D01F6/62 D01F6/78 D01F6/84 D01F6/92 D01F8/00 D01F8/14 D02G3/00 D04H1/42 D04H3/00 D04H3/02 D04H3/16 D21H13/00 (Core/Invention)

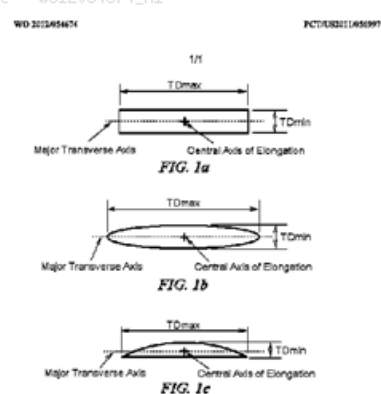
**International (IPC 1-7):** B28B3/20 B29C47/00 D01D5/08 D01D5/30 D01F6/62 D01F6/84 D01F6/86 D01F6/92 D01F8/14 D02G3/00 D04H3/02

**CPC:** D04B1/16 D03D15/00 D02J1/22 D04H3/10 D04H3/16 Y10T428/2913 Y10T428/2918 Y10T428/2924 Y10T428/2929 Y10T428/2931 Y10T428/25 Y10T428/29 Y10T428/2915 Y10T428/2969 Y10T428/2904 Y10T428/298 Y10T428/1334 Y10T428/1345 Y10T428/24355 Y10T428/268 Y10T428/2927 Y10T442/2525 Y10T442/2861 Y10T442/30 Y10T442/3146 Y10T442/3154 Y10T442/3163 Y10T442/60 Y10T442/637 Y10T442/638 Y10T442/64 Y10T442/641 Y10T442/68 Y10T442/681 Y10T442/689 Y10T442/69 Y10T442/609 Y10T442/611 Y10T442/614 Y10T442/619 Y10T442/626 Y10T442/696 Y10T442/697 Y10T442/3065 Y10T428/249921 Y10T428/249938 D01D5/0985 D01D5/36 D04H1/4291 D04H1/435 D21H13/24 D21H13/40 D21H15/10 D04H1/492 D04H1/56 D04H1/4334 D04H1/4391 D04H1/4374 D01F6/84 A61K8/85 A61Q19/00 D01F6/86 D01F6/92 D21H13/20 D01F8/14 D04H1/4382 C08G63/6886 D04H1/485 D04H1/50

**European:** A61K8/85 A61Q19/00 D01D5/098B D01D5/36 D01F6/84 D01F6/86 D01F6/92 D01F8/14 D02J1/22 D04H1/42 D04H1/4291 D04H1/435 D04H1/4382 D04H1/56B D04H13/00B2 D04H3/10 D04H3/16 D21H13/20 D21H13/24 D21H13/40 D21H15/10

**US:** 128/849 15/104.93 15/104.930S 15/209.1 162/145 162/145S 162/146 162/146S 162/157.2 162/157.200S 162/157.3 162/157.300P 162/157.300S 2/114 2/114S 2/167 2/46 210/500.1 210/500.100P 241/1 241/1P 264/103 264/103P 264/103S 264/112 264/112 264/112P 264/115 264/115P 264/115S 264/129 264/129 264/129S 264/130 264/145 264/145S 264/164 264/172.11 264/172.110S 264/172.13 264/172.130P 264/172.130S 264/172.14 264/172.15 264/172.150P 264/172.150S 264/172.16 264/172.160S 264/172.17 264/172.170S 264/172.18 264/172.180S 264/173.16 264/173.160S 264/173.19 264/173.190S 264/176.1 264/176.100S 264/178.00FS 264/178F 264/210.6 264/210.8 264/211 264/211.12 264/211.120S 264/211.14 264/211.140S 264/211.15 264/211.16 264/211.22 264/211.220S 28/140 283/72 362/351 424/400 424/401 424/401P 424/443 424/443P 424/443S 425/437 428/141 428/221 428/221S 428/296.7 428/323 428/323S 428/338 428/35.2 428/35.5 428/357 428/357S 428/359 428/364 428/364P 428/364S 428/365 428/365S 428/367 428/367P 428/370 428/372 428/372S 428/373 428/373P 428/373S 428/374 428/374S 428/395 428/401 428/401S 429/247 442/123 442/164 442/164S 442/181 442/181S 442/189 442/199 442/199S 442/200 442/200P 442/201 442/201S 442/296.7 442/327 442/327S 442/335 442/337 442/340 442/344 442/344S 442/351 442/351P 442/351S 442/361 442/361S 442/362 442/362S 442/363 442/363S 442/364 442/364P 442/400 442/400S 442/401 442/401S 442/408 442/408S 442/409 442/409S 442/414 442/415 5/413R 5/653

PatBase - W012054674\_A1



510/130 510/130S 510/445 510/445S 510/476 510/476S 512/4 512/4S 514/772.3 514/772.300P 514/772.300S 516/200  
516/200S 523/105 523/105S 524/500 524/500S 525/437 525/437P 525/535 525/535S 528/293 528/295 528/360 528/360S  
55/527 55/527S 602/43 602/43P 602/48 604/358 604/359 604/359P 604/367 604/367S 604/372 604/372S

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AT399891 E         | 20080715         | AT20040755058T     | 20040610         |
| AT456689 E         | 20100215         | AT20040019963T     | 20040610         |
| BR112013009684 A2  | 20160712         | BR20131109684      | 20111020         |
| BR112014017441 A2  | 20170613         | BR20141117441      | 20130117         |
| BR112014017441 A8  | 20170704         | BR20141117441      | 20130117         |
| BR112014017441 A8  | 20170613         | BR20141117441      | 20130117         |
| BR112014017441 A8  | 20170704         | BR20141117441      | 20130117         |
| BRPI0909456 A2     | 20160816         | BR2009PI09456      | 20090319         |
| CN101356306 A      | 20090128         | CN200780001225     | 20070116         |
| CN101573482 A      | 20091104         | CN200780049183     | 20071217         |
| CN102046860 A      | 20110504         | CN200980120628     | 20090319         |
| CN102046860 B      | 20140312         | CN200980120628     | 20090319         |
| CN102704036 A      | 20121003         | CN201210181276     | 20070116         |
| CN102704036 B      | 20160203         | CN201210181276     | 20070116         |
| CN102877160 A      | 20130116         | CN201210270183     | 20070116         |
| CN102877160 B      | 20160316         | CN201210270183     | 20070116         |
| CN102888671 A      | 20130123         | CN201210266165     | 20070116         |
| CN102888671 B      | 20160817         | CN201210266165     | 20070116         |
| CN104145053 A      | 20141112         | CN201380013603     | 20130117         |
| CN104321486 A      | 20150128         | CN201180050648     | 20111020         |
| CN106435822 A      | 20170222         | CN201610605400     | 20070116         |
| DE602004014770 D1  | 20080814         | DE200460014770T    | 20040610         |
| DE602004025396 D1  | 20100318         | DE200460025396T    | 20040610         |
| DE602009013889 D1  | 20130508         | DE200960013889T    | 20090319         |
| DE602011038424 D1  | 20170713         | DE201160038424T    | 20111020         |
| DK2271797 T3       | 20130610         | DK20090727198T     | 20090319         |
| DK2363517 T3       | 20180903         | DK20100192073T     | 20070116         |
| EP1641966 A2       | 20060405         | EP20040755058      | 20040610         |
| EP1641966 B1       | 20080702         | EP20040755058      | 20040610         |
| EP1884581 A1       | 20080206         | EP20070019963      | 20040610         |
| EP1884581 B1       | 20100127         | EP20070019963      | 20040610         |
| EP1941084 A2       | 20080709         | EP20070716653      | 20070116         |
| EP1941084 B1       | 20171129         | EP20070716653      | 20070116         |
| EP2099961 A2       | 20090916         | EP20070853404      | 20071217         |
| EP2271797 A1       | 20110112         | EP20090727198      | 20090319         |
| EP2271797 B1       | 20130313         | EP20090727198      | 20090319         |
| EP2319965 A1       | 20110511         | EP20100192015      | 20070116         |
| EP2322700 A1       | 20110518         | EP20100192041      | 20070116         |
| EP2363517 A1       | 20110907         | EP20100192073      | 20070116         |
| EP2363517 B1       | 20180718         | EP20100192073      | 20070116         |
| EP2487281 A1       | 20120815         | EP20120167235      | 20071217         |
| EP2630297 A1       | 20130828         | EP20110835114      | 20111020         |
| EP2630297 A4       | 20140326         | EP20110835114      | 20111020         |
| EP2630297 B1       | 20170531         | EP20110835114      | 20111020         |
| EP2804968 A1       | 20141126         | EP20130738753      | 20130117         |
| EP2804968 A4       | 20151014         | EP20130738753      | 20130117         |
| ES2403114 T3       | 20130514         | ES20090727198T     | 20090319         |
| IN02478DN2008 A    | 20080627         | IN2008DN02478      | 20080325         |
| IN02887DN2013 A    | 20160401         | IN2013DN02887      | 20130402         |
| IN03816DN2009 A    | 20100402         | IN2009DN03816      | 20090611         |
| IN05310DN2014 A    | 20160831         | IN2014DN05310      | 20140627         |
| IN06786DN2010 A    | 20110729         | IN2010DN06786      | 20100927         |
| IN261009 B         | 20140606         | IN2008DN02478      | 20080325         |
| JP2006528282 T2    | 20061214         | JP20060517231T     | 20040610         |
| JP2009525409 T2    | 20090709         | JP20080552321T     | 20070116         |
| JP2010514956 T2    | 20100506         | JP20090544835T     | 20071217         |
| JP2011094288 A2    | 20110512         | JP20100281964      | 20101217         |
| JP2011516740 T2    | 20110526         | JP20110502934T     | 20090319         |
| JP2012057291 A2    | 20120322         | JP20110235388      | 20111026         |
| JP2012233294 A2    | 20121129         | JP20120162858      | 20120723         |
| JP2013136868 A2    | 20130711         | JP20130039549      | 20130228         |
| JP2013540212 T2    | 20131031         | JP20130535068T     | 20111020         |
| JP2014051770 A2    | 20140320         | JP20130184106      | 20130905         |
| JP2015180791 A2    | 20151015         | JP20150122040      | 20150617         |
| JP2015510553 T2    | 20150409         | JP20140553388T     | 20130117         |
| JP2017020157 A2    | 20170126         | JP20160164614      | 20160825         |
| JP5260551 B2       | 20130814         | JP20090544835T     | 20071217         |
| JP5415770 B2       | 20140212         | JP20080552321T     | 20070116         |
| JP5865012 B2       | 20160217         | JP20110235388      | 20111026         |
| JP6063163 B2       | 20170118         | JP20120162858      | 20120723         |
| KR101109868 B1     | 20120215         | KR20087018814      | 20070116         |
| KR101316578 B1     | 20131015         | KR20097013868      | 20071217         |
| KR101321738 B1     | 20131029         | KR20117015227      | 20070116         |
| KR101362617 B1     | 20140212         | KR20107024652      | 20090319         |
| KR101541627 B1     | 20150803         | KR20137017905      | 20090319         |

|                 |          |               |          |
|-----------------|----------|---------------|----------|
| KR20090009188 A | 20090122 | KR20087018814 | 20070116 |
| KR20090096494 A | 20090910 | KR20097013868 | 20071217 |
| KR20100134088 A | 20101222 | KR20107024652 | 20090319 |
| KR20110082198 A | 20110718 | KR20117015227 | 20070116 |
| KR20110084337 A | 20110721 | KR20117015228 | 20070116 |
| KR20130089285 A | 20130809 | KR20137017905 | 20090319 |
| KR20130132442 A | 20131204 | KR20137012667 | 20111020 |
| KR20140110087 A | 20140916 | KR20147022533 | 20130117 |
| US2004258910 AA | 20041223 | US20040850548 | 20040520 |
| US2004260034 AA | 20041223 | US20030465698 | 20030619 |
| US2005282008 AA | 20051222 | US20050204868 | 20050816 |
| US2006194047 AA | 20060831 | US20060344320 | 20060131 |
| US2007259177 AA | 20071108 | US20070648955 | 20070103 |
| US2008311815 AA | 20081218 | US20080199304 | 20080827 |
| US2011089594 AA | 20110421 | US20100975456 | 20101222 |
| US2011089595 AA | 20110421 | US20100975484 | 20101222 |
| US2011089600 AA | 20110421 | US20100975447 | 20101222 |
| US2011089601 AA | 20110421 | US20100975463 | 20101222 |
| US2011091513 AA | 20110421 | US20100975482 | 20101222 |
| US2011092123 AA | 20110421 | US20100982001 | 20101230 |
| US2011092931 AA | 20110421 | US20100975459 | 20101222 |
| US2011092932 AA | 20110421 | US20100975487 | 20101222 |
| US2011095444 AA | 20110428 | US20100981950 | 20101230 |
| US2011095445 AA | 20110428 | US20100981982 | 20101230 |
| US2011097580 AA | 20110428 | US20100975443 | 20101222 |
| US2011097959 AA | 20110428 | US20100981960 | 20101230 |
| US2011105628 AA | 20110505 | US20100975450 | 20101222 |
| US2011105975 AA | 20110505 | US20100975452 | 20101222 |
| US2011139386 AA | 20110616 | US20100909574 | 20101021 |
| US2011139908 AA | 20110616 | US20100966507 | 20101213 |
| US2011140297 AA | 20110616 | US20100966494 | 20101213 |
| US2011142896 AA | 20110616 | US20100966502 | 20101213 |
| US2011142909 AA | 20110616 | US20100966512 | 20101213 |
| US2011143624 AA | 20110616 | US20100966487 | 20101213 |
| US2011168625 AA | 20110714 | US20110053615 | 20110322 |
| US2012043683 AA | 20120223 | US20100966483 | 20101213 |
| US2012058163 AA | 20120308 | US20100966521 | 20101213 |
| US2012091613 AA | 20120419 | US20100966518 | 20101213 |
| US2012251597 AA | 20121004 | US20120352362 | 20120118 |
| US2013298362 AA | 20131114 | US20130944458 | 20130717 |
| US2013299108 AA | 20131114 | US20130941816 | 20130715 |
| US6989193 BB    | 20060124 | US20040850548 | 20040520 |
| US7687143 BB    | 20100330 | US20070648955 | 20070103 |
| US7892993 BB    | 20110222 | US20060344320 | 20060131 |
| US7902094 BB    | 20110308 | US20050204868 | 20050816 |
| US8148278 BB    | 20120403 | US20100982001 | 20101230 |
| US8158244 BB    | 20120417 | US20100975459 | 20101222 |
| US8163385 BB    | 20120424 | US20100975450 | 20101222 |
| US8178199 BB    | 20120515 | US20110053615 | 20110322 |
| US8216953 BB    | 20120710 | US20100966487 | 20101213 |
| US8227362 BB    | 20120724 | US20100966502 | 20101213 |
| US8236713 BB    | 20120807 | US20100981960 | 20101230 |
| US8247335 BB    | 20120821 | US20100966512 | 20101213 |
| US8257628 BB    | 20120904 | US20100975456 | 20101222 |
| US8262958 BB    | 20120911 | US20100981950 | 20101230 |
| US8273451 BB    | 20120925 | US20100975452 | 20101222 |
| US8277706 BB    | 20121002 | US20100981982 | 20101230 |
| US8314041 BB    | 20121120 | US20100975487 | 20101222 |
| US8388877 BB    | 20130305 | US20100975463 | 20101222 |
| US8398907 BB    | 20130319 | US20100975447 | 20101222 |
| US8435908 BB    | 20130507 | US20100966521 | 20101213 |
| US8444895 BB    | 20130521 | US20100966483 | 20101213 |
| US8444896 BB    | 20130521 | US20100966518 | 20101213 |
| US8513147 BB    | 20130820 | US20080199304 | 20080827 |
| US8557374 BB    | 20131015 | US20100975482 | 20101222 |
| US8623247 BB    | 20140107 | US20100966507 | 20101213 |
| US8691130 BB    | 20140408 | US20100975484 | 20101222 |
| WO04113598 A2   | 20041229 | WO2004US18682 | 20040610 |
| WO04113598 A3   | 20050310 | WO2004US18682 | 20040610 |
| WO04113598 C1   | 20050901 | WO2004US18682 | 20040610 |
| WO07089423 A2   | 20070809 | WO2007US01082 | 20070116 |
| WO07089423 A3   | 20080313 | WO2007US01082 | 20070116 |
| WO08085307 A2   | 20080717 | WO2007US25661 | 20071217 |
| WO08085307 A3   | 20081231 | WO2007US25661 | 20071217 |
| WO09123678 A1   | 20091008 | WO2009US01717 | 20090319 |
| WO12054674 A1   | 20120426 | WO2011US56997 | 20111020 |
| WO13109666 A1   | 20130725 | WO2013US21803 | 20130117 |
| WO13109667 A1   | 20130725 | WO2013US21804 | 20130117 |

**Priority:**

|               |          |               |          |               |          |
|---------------|----------|---------------|----------|---------------|----------|
| US20030465698 | 20030619 | US20040850548 | 20040520 | US20040858548 | 20040601 |
| EP20040755058 | 20040610 | JP20060517231 | 20040610 | WO2004US18682 | 20040610 |

|                |          |                |          |               |          |
|----------------|----------|----------------|----------|---------------|----------|
| US20050204868  | 20050816 | US20060344320  | 20060131 | US20070648955 | 20070103 |
| EP20070648955  | 20070104 | CN200780001225 | 20070116 | EP20070716653 | 20070116 |
| JP20080552321  | 20070116 | JP20080552321T | 20070116 | JP20110235388 | 20070116 |
| JP20120162858  | 20070116 | WO2007US01082  | 20070116 | EP20070853404 | 20071217 |
| WO2007US25661  | 20071217 | US20080041699P | 20080402 | US20080041699 | 20080402 |
| US20080199304  | 20080827 | EP20090727198  | 20090319 | JP20110502934 | 20090319 |
| JP20110502934T | 20090319 | JP20130184106  | 20090319 | WO2009US01717 | 20090319 |
| US20100909574  | 20101021 | US20100966507  | 20101213 | US20100966494 | 20101213 |
| US20100966502  | 20101213 | US20100966512  | 20101213 | US20100966487 | 20101213 |
| US20100966483  | 20101213 | US20100966521  | 20101213 | US20100966518 | 20101213 |
| US20100975456  | 20101222 | US20100975447  | 20101222 | US20100975484 | 20101222 |
| US20100975463  | 20101222 | US20100975482  | 20101222 | US20100975459 | 20101222 |
| US20100975487  | 20101222 | US20100975443  | 20101222 | US20100975450 | 20101222 |
| US20100975452  | 20101222 | US20100982001  | 20101230 | US20100981950 | 20101230 |
| US20100981982  | 20101230 | US20100981960  | 20101230 | US20110053615 | 20110322 |
| EP20110835114  | 20111020 | WO2011US56997  | 20111020 | US20120352362 | 20120118 |
| WO2013US21803  | 20130117 | US20130941816  | 20130715 | US20130944458 | 20130717 |
| JP20150122040  | 20150617 | JP20160164614  | 20160825 |               |          |

**Probable Assignee:** EASTMAN CHEMICAL CO

**Assignee(s):** (std): ANDERSON CHRIS DELBERT ; CLARK MARK DWIGHT ; CRAIN ALLEN L ; CRAIN ALLEN LYNN ; EASTMAN CHEMICAL CO ; EASTMAN CHEM CO ; FLEENOR CORALIE M ; HAILE WILLIAM ALSTON ; GEORGE SCOTT ELLERY ; HALE WESLEY RAYMOND ; JENKINS WAYLON LEWELLYN ; HAILE WILLIAM A ; GEORGE SCOTT E ; HALE WESLEY R ; JENKINS WAYLON L ; GUPTA RAKESH K ; KLOSIEWICZ DANIEL W ; SEO KAB S ; GUPTA RAKESH KUMAR ; SEO KAB SIK ; KLOSIEWICZ DANIEL WILLIAM ; MITCHELL MELVIN GLENN ; FLEENOR CORALIE MCKENNA

**Assignee(s):** EASTMAN CHEMICAL CO KINGSFORT ; EASTMAN CHEMICAL COMPANY ; EAST CHEMICAL CO ; EASTMAN CHEMICAL CO

**Inventor(s):** (std): HAILE WILLIAM ALSTON ; GEORGE SCOTT ELLERY ; HALE WESLEY RAYMOND ; JENKINS WAYLON LEWELLYN ; HAILE WILLIAM A ; GEORGE SCOTT E ; HALE WESLEY R ; JENKINS WAYLON L ; GUPTA RAKESH K ; KLOSIEWICZ DANIEL W ; SEO KAB S ; FLEENOR CORALIE M ; CRAIN ALLEN L ; SEO KAB SIK ; FLEENOR CORALIE MCKENNA ; CRAIN ALLEN LYNN ; KLOSIEWICZ DANIEL WILLIAM ; GUPTA RAKESH KUMAR ; HAILE WILLIAM ; JENKINS WAYLON ; HALE WESLEY ; GEORGE SCOTT ; MITCHELL MELVIN GLENN ; ELLERY GEORGE SCOTT ; SIK SEO KAB ; MCKENNA FLEENOR CORALIE ; WILLIAM KLOSIEWICZ DANIEL ; LYNN CRAIN ALLEN ; KUMAR GUPTA RAKESH ; FLEENOR CORALIE MC KENNA ; ANDERSON CHRIS DELBERT ; MITCHELL PAULA HINES ; WOLFE AMBER LAYNE ; MITCHELL MARVIN LYNN ; CLARK MARK DWIGHT ; MELVIN GLENN MITCHELL ; GLENN MITCHELL MELVIN ; CROSIEWICZ DANIEL WILLIAM ; CRAIN ALLEN LIN ; GUPTA RAKESH ; MITCHELL MELVIN ; KLOSIEWICZ DANIEL ; DANIEL WILLIAM KLOSIEWICZ ; SCOTT ELLERY GEORGE ; RAKESH KUMAR GUPTA ; CHRIS DELBERT ANDERSON ; MARK DWIGHT CLARK ; MITCHELL MELVIN GLEN ; KLOSIEWICZ DANIEL WILLIAM

**Inventor(s):** DANIEL WILLIAM KLOSIEWICZ ; MELVIN GLEN MITCHELL ; WOLFE AMBER LAYNE LANDRUM ; MITCHELL PAULA HINES PARKER ; MITCHELL MARVIN LYNN PARKER ; ANDERSON CHRIS DELBERT PERRYSBURG ; CLARK MARK DWIGHT KINGSFORT ; PAULA HINES MITCHELL ; MARVIN LYNN MITCHELL ; ALLEN LYNN CRAIN ; CORALIE MCKENNA FLEENOR ; CRAIN ALLEN ; FLEENOR CORALIE ; SEO KAB ; GUPTA RAKESH KUMAR KINGSFORT ; MITCHELL MELVIN GLENN PENROSE ; KLOSIEWICZ DANIEL WILLIAM KINGSFORT ; AMBER LAYNE WOLFE ; KAB SIK SEO

**Agent(s):** LEDERER AND KELLER PATENTANWALTE PARTNERSCHAFT MBB; RICKER MATHIAS ET AL; TOSTMANN HOLGER CARL; BEST MICHAEL ET AL; BEST MICHAEL; BROWN FRASER GREGORY JAMES; DE ELZABURU ALBERTO; AOKI ATSUSHI; ISHIDA TAKASHI; KOGA TETSUJI; YAMAMOTO OSAMU; TAKEUCHI SHIGEO; ONO SHINJIRO; KOBAYASHI YASUSHI; HOSHINO OSAMU; TOMITA HIROYUKI; ERIC D MIDDLEMAS EASTMAN CHEMICAL CO; POLLY C OWEN EASTMAN CHEMICAL CO; POLLY C OWEN; POLLY C; BERNARD J; TAMMYE L; TAMMYE; OWEN POLLY C

**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 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 NZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW 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 YU ZA ZM ZW

## 2) Family number: 31373033 (US2004243079A)

© PatBase

**Title:** DISPOSABLE DIAPER

**Abstract:** A disposable diaper includes a body fluid absorbing zone extending over a crotch region further into front and rear waist regions, side flaps extending in a longitudinal direction outside transversely opposite side edges of the zone, and end flaps extending in a transverse direction outside longitudinally opposite ends of the zone. The side flaps in the front waist region are formed from a composite nonwoven fabric composed of a first fibrous nonwoven fabric facing away from the wearer's skin and a second fibrous nonwoven fabric laminated on the first fibrous nonwoven fabric and facing the wearer's skin. The first fibrous nonwoven fabric has a kinetic friction coefficient higher than a kinetic friction coefficient of the second fibrous nonwoven fabric.

### Classifications:

**International (IPC 8-9):** A61F13/15 A61F13/20 A61F13/476 A61F13/49 A61F13/494 A61F13/515 A61F13/56

A61F5/44 (Advanced/Invention);

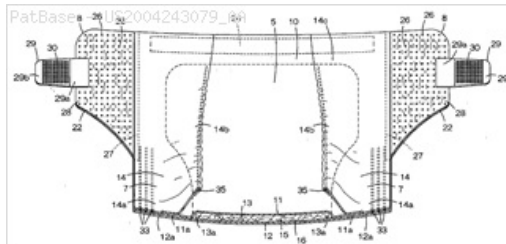
A61F13/476 A61F13/49 A61F13/515 (Advanced/Non-invention); A61F13/15 A61F13/56 A61F5/44 (Core/Invention)

**International (IPC 1-7):** A61F13/15 A61F13/20 A61F13/476 A61F13/49 A61F13/494 A61F13/515 A61F13/56 A61F5/44

**CPC:** A61F13/49015 A61F13/49466

**European:** A61F13/494B A61F13/49D2D2

**US:** 604/367 604/367P 604/385.01 604/385.010S 604/385.04 604/385.3 604/385.300S 604/387 604/387S



### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| CN1329014 C        | 20070801         | CN200410047584     | 20040527         |
| CN1572267 A        | 20050202         | CN200410047584     | 20040527         |
| JP2004350756 A2    | 20041216         | JP20030149373      | 20030527         |
| JP4171671 B2       | 20081022         | JP20030149373      | 20030527         |
| KR100927658 B1     | 20091120         | KR20040037181      | 20040525         |
| KR20040101926 A    | 20041203         | KR20040037181      | 20040525         |
| TW200427438 A      | 20041216         | TW20040115011      | 20040526         |

|                 |          |               |          |
|-----------------|----------|---------------|----------|
| TWI235650 B     | 20050711 | TW20040115011 | 20040526 |
| US2004243079 AA | 20041202 | US20040853239 | 20040526 |
| US2827511 BB    | 20121016 | US20040853239 | 20040526 |

#### Priority:

JP20030149373 20030527

**Probable Assignee:** UNI CHARM CORP

**Assignee(s):** (std): MINATO HIRONAO ; MITSUI KOICHIRO ; SAYAMA YASUSHI ; UNI CHARM CORP ; UNI CHARM LTD ; UNICHARM CORP

**Assignee(s):** UNI CHARM CO LTD

**Inventor(s):** (std): MITSUI KOICHIRO ; MINATO HIRONAO ; SAYAMA YASUSHI ; KOICHIRO MITSUI ; HIRONAO MINATO ; YASUSHI SAYAMA ; YASUSHI MITSUI KOICHIRO MINATO ; MITSUI KOUICHIRO

**Inventor(s):** MITSUI KOICHIRO MINATO HIRONAO SAYAMA YASUSHI

**Agent(s):** LOWE HAUPTMAN HAM AND BERNER LLP

### 3) Family number: 30652200 (US2004110901A)

© PatBase

**Title:** GRAFTED CYCLODEXTRIN

**Abstract:** Thermoplastic polymer compositions, films, continues, closures, laminates can comprise a modified vinyl polymer said modified polymer having a moiety comprising a cyclodextrin compound. The cyclodextrin compound, locked into the polymer structure, can absorb impurities, permeants, or other undesirable volatile materials. The cooperation between the cyclodextrin grafted onto the thermoplastic polymer and the polymer structure can provide barrier properties to a film, web or other polymer structure. A permeant or a contaminant can be complexed or trapped within the polymer and held within the film or Web preventing the permeant or contaminant from passing into the interior of a container or enclosure.

#### Classifications:

**International (IPC 8-9):** B28B3/20 B29B9/12 B32B1/08 B32B27/10 B32B27/32 B65D39/18 B65D53/06 B65D65/02 B65D65/38 B65D75/28 C08B C08B31/00 C08B37/00 C08B37/16 C08F C08F16/06 C08F267/04 C08F299/00 C08G61/00 C08G63/91 C08J C08J3/20 C08J5/00 C08J5/18 C08K5/20 C08L C08L23/00 C08L23/02 C08L23/04 C08L23/06 C08L23/16 C08L23/26 C08L29/00 C08L5/16 C08L51/00 C08L67/02 C32B28/08 D02G3/02 F16L11/04 (Advanced/Invention); B29K23/00 C08B37/16 C08L51/06 (Advanced/Non-invention); B32B27/32 C08B37/00 C08L29/00 (Core/Invention); C08L (Subclass/Invention); C08B C08F C08J (Subclass/Non-invention)

**International (IPC 1-7):** B29B9/12 B29K23/00 B65D1/00 B65D65/38 B65D75/28 C08B37/16 C08F299/00 C08J3/20 C08J5/00 C08J5/18 C08K5/20 C08L23/02 C08L23/04 C08L23/26 C08L5/16 C08L51/00 C08L51/02 C08L67/02

**CPC:** B32B5/02 B32B15/08 B32B15/085 B32B27/08 B32B27/10 B32B27/12 B32B27/302 B32B2262/0253 B32B2262/12 B32B2307/31 B32B2439/40 B32B2439/70 B32B2555/02 Y10T428/13 Y10T428/1352 Y10T428/1397 Y10T428/269 Y10T428/2878 C08F8/14 C08F8/46 C08G81/02 C08G81/024 C08L87/005 Y10T428/1393 Y10T428/2929 Y10T428/298 Y10T428/12431 B32B27/02 B32B27/28 B32B27/32 C08L5/16 C08L23/04 C08L51/06 Y10T428/24998 Y10T428/31895 Y10T428/31902 Y10T442/608 Y10T442/626 Y10T442/681 Y10T428/249926 C08B37/0012

**European:** B32B27/02 B32B27/28 B32B27/32 C08B37/00M2B C08F8/14 C08F8/46 C08G81/02 C08G81/02F C08L23/04 M08L5/16 M08L51/06 M08L87/00B

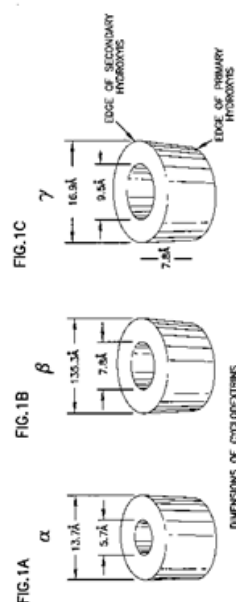
**US:** 106/287.29 106/287.290S 264/176.1 264/176.100S 427/385.5 427/385.500S 428/220 428/220P 428/220S 428/292.7 428/315.9 428/339 428/34.1 428/35.7 428/35.700S 428/355EN 428/36.91 428/36.910P 428/36.92 428/373 428/373S 428/401 428/401S 428/511 428/511S 428/513 428/606 428/606P 428/77 428/77S 442/334 442/334S 442/351 442/351S 442/401 442/401S 524/210 524/48 525/178 525/185 525/186 525/187 525/190 525/207 525/231 525/231S 525/240 525/240S 525/264 525/285 525/326.1 525/327.4 525/329.5 525/451 525/54.2 525/54.200P 525/54.200S 525/54.21 525/54.23 525/54.24 525/54.240S 525/54.26 525/54.3 525/55 525/55S 525/64 525/64S 525/69 525/69P 525/7 525/70 525/70P 525/70S 526/238.22 526/238.220S 528/396 528/396S

#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| CA2452293 AA       | 20040610         | CA20032452293      | 20031205         |
| CA2452293 C        | 20130409         | CA20032452293      | 20031205         |
| CA2531311 AA       | 20060627         | CA20052531311      | 20051221         |
| CA2531311 C        | 20121211         | CA20052531311      | 20051221         |
| CN1314746 C        | 20070509         | CN200310124963     | 20031210         |
| CN1609138 A        | 20050427         | CN200310124963     | 20031210         |
| EP1674522 A1       | 20060628         | EP20050108685      | 20050921         |
| HK1075059 A1       | 20071026         | HK20050107300      | 20050822         |
| HK1075059 A1       | 20051202         | HK20050107300      | 20050822         |
| HK1075059 A3       | 20051202         | HK20050107300      | 20050822         |
| HK1075059 B        | 20071026         | HK20050107300      | 20050822         |
| HK1088348 A1       | 20061103         | HK20060110497      | 20060921         |
| HK1088348 A3       | 20061103         | HK20060110497      | 20060921         |
| JP2004197084 A2    | 20040715         | JP20030397846      | 20031127         |
| JP2006183033 A2    | 20060713         | JP20050316721      | 20051031         |
| JP4970706 B2       | 20120711         | JP20030397846      | 20031127         |
| KR101120203 B1     | 20120323         | KR20030089771      | 20031210         |
| KR20040050886 A    | 20040617         | KR20030089771      | 20031210         |
| MX347751 B         | 20170511         | MX20080011193      | 20051208         |

PatBase - US2004110901\_AA

Patent Application Publication Jun. 10, 2004 Sheet 1 of 7 US 2004/010901 A1



|                 |          |               |          |
|-----------------|----------|---------------|----------|
| MXPA03011425 A1 | 20050603 | MX2003PA11425 | 20031210 |
| MXPA05013342 A1 | 20060626 | MX2005PA13342 | 20051208 |
| NO20035472 A0   | 20031209 | NO20030005472 | 20031209 |
| US2004110901 AA | 20040610 | US20030672297 | 20030925 |
| US2005131119 AA | 20050616 | US20040023288 | 20041227 |
| US2006182917 AA | 20060817 | US20060403457 | 20060413 |
| US2006183856 AA | 20060817 | US20060403446 | 20060413 |
| US2006183857 AA | 20060817 | US20060403480 | 20060413 |
| US2006205873 AA | 20060914 | US20060429579 | 20060505 |
| US2007264520 AA | 20071115 | US20070761105 | 20070611 |
| US2008032110 AA | 20080207 | US20070761017 | 20070611 |
| US7166671 BB    | 20070123 | US20030672297 | 20030925 |
| US7365123 BB    | 20080429 | US20060403446 | 20060413 |
| US7385004 BB    | 20080610 | US20040023288 | 20041227 |
| US7605199 BB    | 20091020 | US20060429579 | 20060505 |
| US7795333 BB    | 20100914 | US20060403480 | 20060413 |
| US8129450 BB    | 20120306 | US20070761105 | 20070611 |
| US8334343 BB    | 20121218 | US20070761017 | 20070611 |
| US8501308 BB    | 20130806 | US20060403457 | 20060413 |

**Priority:**

|                |          |               |          |               |          |
|----------------|----------|---------------|----------|---------------|----------|
| US20020432523P | 20021210 | US20030672297 | 20030925 | CA20032452293 | 20031205 |
| US20040023288  | 20041227 | CA20052531311 | 20051221 | US20060403446 | 20060413 |
| US20060403457  | 20060413 | US20060403480 | 20060413 | US20060429579 | 20060505 |
| US20070761105  | 20070611 | US20070761017 | 20070611 |               |          |

**Probable Assignee:** CELLRESIN TECHNOLOGIES LLC

**Assignee(s):** (std): BEAVERSON NEIL J ; BOHRER TIMOTHY H ; CELLRESIN TECH LLC ; CELLRESIN TECHNOLOGIES LLC ; KELLENBERGER STANLEY R ; SEETHAMRAJU KASYAP V ; WOOD WILLARD E

**Assignee(s):** CELLRESIN TECHNOLOGIES LLC 1789 BUREKLE CIRCLE ST PAUL MINNESOTA

**Inventor(s):** (std): WOOD WILLARD E ; BEAVERSON NEIL J ; SEETHAMRAJU KASYAP V ; KASYAP V SEETHAMRAJU ; WILLARD E WOOD ; BOHRER TIMOTHY H ; KELLENBERGER STANLEY R ; WOOD WILLARD E BEAVERSON NEIL

**Inventor(s):** BEAVERSON NEIL ; WOOD WILLARD ; SEETHAMRAJU KASYAP ; KASYAP V SEETHAMRAJU ; NEIL J BEAVERSON ; BOHRER TIMOTHY ; KELLENBERGER STANLEY

**Agent(s):** GOUDREAU GAGE DUBUC ; LAVERY DE BILLY LLP ; CLT PATENT AND TRADEMARK HK LTD UNIT 10 34 F OFFICE TOWER CONVENTION; CLT PATENT AND TRADEMARK HK LTD; VIVIEN CHAN AND CO; MERCHANT AND GOULD PC; ATTENTION OF MARK DIPIETRO MERCHANT AND GOULD PC; ATTN LORI P SARAGENO MERCHANT AND GOULD PC; PAULY DEVRIES SMITH AND DEFFNER LLC

**Designated states:** AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

**4) Family number: 15195473 (US2008119586A)**

© PatBase

**Title:** ABSORBENT COMPOSITES AND ABSORBENT ARTICLES CONTAINING SAME

**Abstract:** When a superabsorbent material is to be incorporated into an absorbent composite in a relatively high concentration, it is necessary to carefully choose the superabsorbent material. Properties of the superabsorbent material to be considered are total Absorbent Capacity, resistance to Deformation Under Load, the ability of the superabsorbent material to absorb while under a restraining force, and the ability of the superabsorbent material to wick fluids away from the insult area. By quantifying these characteristics of a superabsorbent material, Applicants are able to predict which superabsorbent materials are suited for use in absorbent composites comprising a relatively high concentration of superabsorbent material.

**Classifications:**

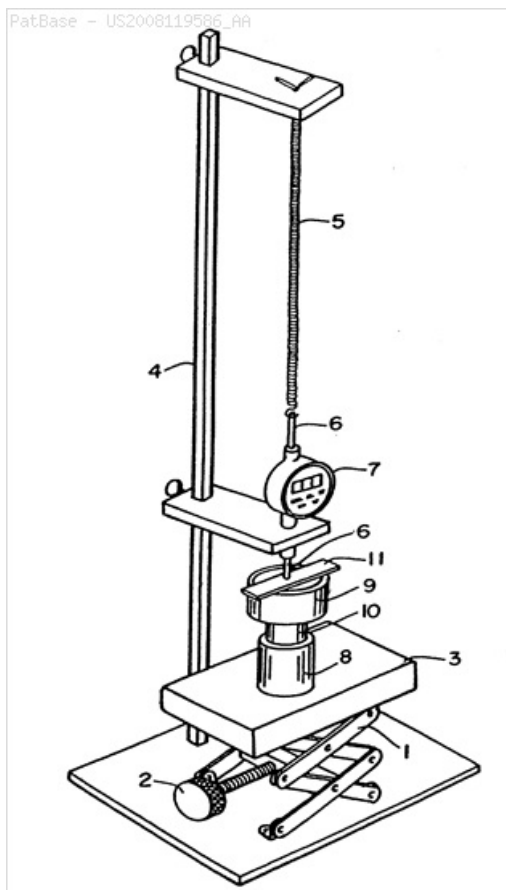
**International (ipc 8-9):** A61F13/00 A61F13/15 A61F13/49 A61F13/53  
A61F13/534 A61F5/44 A61L15/20 A61L15/24  
A61L15/60 (Advanced/Invention);  
A61F5/44 (Advanced/Non-invention);  
A61F13/00 A61F13/15 A61F5/44 A61L15/16 (Core/Invention);  
A41B A61F (Subclass/Invention)

**International (ipc 1-7):** A41B A61F13/00 A61F13/15 A61F13/18  
A61F13/20 A61F13/46 A61F5/44 A61F5/48 A61L15/20 A61L15/60  
B32B5/06 D04H1/00

**CPC:** A61F13/53 A61L15/24 Y10S428/913 Y10T428/24603  
A61F2013/530744 A61F13/51121 A61F13/513 A61F13/512  
A61F13/49009 A61F13/15203 A61F13/49 A61F13/49011 A61F13/491  
A61F13/49413 A61F13/5116 A61F13/531 A61F13/537  
A61F2013/15284 A61F2013/15365 A61F2013/49076 A61F2013/49077  
A61F2013/4948 A61F2013/51014 A61F2013/51019 A61F2013/51033  
A61F2013/51052 A61F2013/51409 A61F2013/51411 A61F2013/51441  
A61F2013/51443 A61F2013/530007 A61F2013/530014  
A61F2013/530029 A61F2013/530131 A61F2013/530226  
A61F2013/530233 A61F2013/53024 A61F2013/530255  
A61F2013/530299 A61F2013/530328 A61F2013/530343  
A61F2013/53035 A61F2013/530437 A61F2013/530481  
A61F2013/530569 A61F2013/530583 A61F2013/530591  
A61F2013/530613 A61F2013/5307 A61F2013/530708  
A61F2013/530766 A61F2013/530802 A61F2013/53445  
A61F2013/53721 A61F2013/53795 A61F2013/53908 A61F2013/53916  
A61F2013/8488 A61F2013/8491 A61L15/60 A61F13/511

**European:** A61F13/15J A61F13/49D2 A61F13/53 A61F13/531  
A61L15/24 A61L15/60 K61F13/15C3D1 K61F13/15C3D1A  
K61F13/15C3D3 K61F13/15C3D3A K61F13/15C5D K61F13/15C5G  
K61F13/15C5J5 K61F13/15C5M7 K61F13/15D4B3A K61F13/15E10A  
K61F13/15E10A1 K61F13/15E2A K61F13/15E2D K61F13/15E2D4  
K61F13/15E2D7 K61F13/15E3 K61F13/15E3A K61F13/15E3C  
K61F13/15E4 K61F13/15E4J K61F13/15E4J1 K61F13/15E4J2  
K61F13/15E4J4 K61F13/15E4J5 K61F13/15E4K K61F13/15E4M  
K61F13/15E4M1 K61F13/15E6 K61F13/15E7 K61F13/15E7C  
K61F13/15E7D K61F13/15E7D1 K61F13/15E7D2 K61F13/15E7F  
K61F13/15E7H K61F13/15E7H5 K61F13/15E8 K61F13/15H7  
K61F13/15H7A K61F13/15J8 K61F13/15J8D K61F13/49 K61F13/491

K61F13/494A1 K61F13/494D K61F13/49D2B K61F13/49H5  
K61F13/49H6 K61F13/511 K61F13/511D4 K61F13/511E  
K61F13/514A4 K61F13/534C K61F13/537 K61F13/537B5  
K61F13/537H K61F13/539A K61F13/539A1 K61F13/53L K61F13/53L1  
K61F13/53L3 K61F13/53M K61F13/53M4 K61F13/53M4A  
K61F13/53M4B K61F13/53M4D K61F13/53M4E K61F13/53M5  
K61F13/53M7 K61F13/53M7A K61F13/53P K61F13/53Q K61F13/53Q3  
K61F13/53Q4 K61F13/53Q4A K61F13/53Q4B K61F13/53Q6  
K61F13/53Q8 K61F13/53Q8B1 K61F13/53Q8B3 K61F13/53R  
K61F13/84E K61F13/84E1  
**US:** 428/171 428/237 428/273 428/284 428/298 428/913 523/111  
604/367 604/378



#### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AU199223507 A1     | 19930318         | AU19920023507      | 19920910         |
| AU199223508 A1     | 19930318         | AU19920023508      | 19920910         |
| AU199223509 A1     | 19930325         | AU19920023509      | 19920910         |
| AU199472953 A1     | 19941124         | AU19940072953      | 19940913         |
| AU199472954 A1     | 19941124         | AU19940072954      | 19940913         |
| AU656017 B2        | 19950119         | AU19920023508      | 19920910         |
| AU657993 B2        | 19950330         | AU19920023507      | 19920910         |
| AU658439 B2        | 19950413         | AU19920023509      | 19920910         |
| AU679095 B2        | 19970619         | AU19940072954      | 19940913         |
| AU685822 B2        | 19980129         | AU19940072953      | 19940913         |
| BRPI9203134 A      | 19930413         | BR1992PI03134      | 19920813         |
| BRPI9203246 A      | 19930413         | BR1992PI03246      | 19920820         |
| BRPI9203512 A      | 19930413         | BR1992PI03512      | 19920910         |
| CA2057694 AA       | 19930312         | CA19912057694      | 19911216         |
| CA2057694 C        | 20020528         | CA19912057694      | 19911216         |
| CA2060743 AA       | 19930312         | CA19922060743      | 19920205         |
| CA2060744 AA       | 19930312         | CA19922060744      | 19920205         |
| CA2060744 C        | 20020129         | CA19922060744      | 19920205         |
| CA2076945 AA       | 19930312         | CA19922076945      | 19920826         |
| CA2076945 C        | 20021008         | CA19922076945      | 19920826         |
| DE69215465 D1      | 19970109         | DE19926015465      | 19920910         |
| DE69215465 T2      | 19970327         | DE19926015465T     | 19920910         |
| DE69215465 T3      | 20021002         | DE19926015465T     | 19920910         |
| DE69217817 D1      | 19970410         | DE19926017817      | 19920910         |
| DE69217817 T2      | 19970814         | DE19926017817T     | 19920910         |
| DE69217817 T3      | 20061005         | DE19926017817T     | 19920910         |
| DE69219705 D1      | 19970619         | DE19926019705      | 19920910         |
| DE69219705 T2      | 19971127         | DE19926019705T     | 19920910         |
| DE69231774 D1      | 20010510         | DE19926031774      | 19920910         |
| DE69231774 T2      | 20011122         | DE19926031774T     | 19920910         |
| DE69231775 D1      | 20010510         | DE19926031775      | 19920910         |
| DE69231775 T2      | 20011122         | DE19926031775T     | 19920910         |
| EG19584 A          | 19950629         | EG19920000529      | 19920909         |
| EG19718 A          | 19950830         | EG19920000531      | 19920909         |
| EG19802 A          | 19960531         | EG19920000533      | 19920909         |
| EP0532002 A1       | 19930317         | EP19920115510      | 19920910         |
| EP0532002 B1       | 19970514         | EP19920115510      | 19920910         |
| EP0532005 A1       | 19930317         | EP19920115518      | 19920910         |
| EP0532005 B1       | 19961127         | EP19920115518      | 19920910         |
| EP0532005 B2       | 20011205         | EP19920115518      | 19920910         |
| EP0539703 A1       | 19930505         | EP19920115530      | 19920910         |
| EP0539703 B1       | 19970305         | EP19920115530      | 19920910         |
| EP0539703 B2       | 20051019         | EP19920115530      | 19920910         |

|                 |          |                |          |
|-----------------|----------|----------------|----------|
| EP0761191 A2    | 19970312 | EP19960117365  | 19920910 |
| EP0761191 A3    | 19970326 | EP19960117365  | 19920910 |
| EP0761191 B1    | 20010404 | EP19960117365  | 19920910 |
| EP0761192 A2    | 19970312 | EP19960117367  | 19920910 |
| EP0761192 A3    | 19970326 | EP19960117367  | 19920910 |
| EP0761192 B1    | 20010404 | EP19960117367  | 19920910 |
| ES2094262 T3    | 19970116 | ES19920115518T | 19920910 |
| ES2094262 T5    | 20020216 | ES19920115518T | 19920910 |
| ES2097846 T3    | 19970416 | ES19920115530T | 19920910 |
| ES2097846 T5    | 20060416 | ES19920115530T | 19920910 |
| ES2100991 T3    | 19970701 | ES19920115510T | 19920910 |
| ES2155561 T3    | 20010516 | ES19960117365T | 19920910 |
| ES2155562 T3    | 20010516 | ES19960117367T | 19920910 |
| HK1006393 A1    | 19990226 | HK19980105653  | 19980618 |
| JP5200068 A2    | 19930810 | JP19920241547  | 19920910 |
| JP5245168 A2    | 19930924 | JP19920241548  | 19920910 |
| JP5261126 A2    | 19931012 | JP19920241546  | 19920910 |
| KR100217829 B1  | 19990901 | KR19920016560  | 19920909 |
| KR100217832 B1  | 19990901 | KR19920016556  | 19920909 |
| KR100230217 B1  | 19991115 | KR19920016557  | 19920909 |
| KR19930005597 A | 19930420 | KR19920016556  | 19920909 |
| KR19930005598 A | 19930420 | KR19920016557  | 19920909 |
| KR19930005637 A | 19930420 | KR19920016560  | 19920909 |
| KR930005597 A   | 19930420 | KR19920016556  | 19920909 |
| KR930005637 A   | 19930420 | KR19920016560  | 19920909 |
| MX9200645 A1    | 19940331 | MX19920000645  | 19920214 |
| MX9200647 A1    | 19930901 | MX19920000647  | 19920214 |
| MX9200648 A1    | 19921101 | MX19920000648  | 19920214 |
| MX9200648 A2    | 19930120 | MX19920000648  | 19920214 |
| PH31629 A       | 19990112 | PH19920044845  | 19920820 |
| TR28847 A       | 19970806 | TR19920000857  | 19920910 |
| US2008119586 AA | 20080522 | US20070939315  | 20071113 |
| US5192606 A     | 19930309 | US19910757778  | 19910911 |
| US5509915 A     | 19960423 | US19930096654  | 19930722 |
| ZA9200306 A     | 19921028 | ZA19920000306  | 19920115 |
| ZA9200308 A     | 19921028 | ZA19920000308  | 19920115 |
| ZA9206099 A     | 19930302 | ZA19920006099  | 19920813 |

#### Priority:

|                        |                        |                        |
|------------------------|------------------------|------------------------|
| US19910757778 19910911 | US19910757760 19910911 | US19910757787 19910911 |
| CA19912057694 19911216 | CA19922060743 19920205 | CA19922060744 19920205 |
| US19920906001 19920626 | CA19922076945 19920826 | AU19920023507 19920910 |
| EP19920115510 19920910 | US19930096654 19930722 | US19930171379 19931221 |
| US20070939315 20071113 |                        |                        |

**Probable Assignee:** KIMBERLY CLARK CORP

**Assignee(s):** (std): KIMBERLEY CLARK CORP ; IWANSKI DAVID GERARD ; KELLENBERGER STANLEY ROY ; QIN JIAN ; KIMBERLY CLARK CORP ; SHIH SCHROEDER WEN HUEY ; YARBROUGH SANDRA MARIE ; SZYMONSKI KRZYSZTOF ANDRZEJ ; TSAI CHUAN LING ; BYERLY SHANNON KATHLEEN ; KIMBERLY CLARK CO ; KIMBERLY CLARKE CORP

**Assignee(s):** KIMBERLY CLARK WORLDWIDE INC ; BRUD LYNN CAROL ; ELLIS CLIFFORD JACKSON ; EVERETT ROB DAVID ; WENTZEL TOM KARL ; ZENKER DAVID LOUIS ; ZUNKER MARYANN ; STEVENS ROBERT ALAN ; SZYMONSKI KRZYSZTOF ANDRZEJ ; KIMBERLY KLARK CORP ; KIMBERLY CLARK CORP NEENAH WIS US ; MCCORMACK ANN LOUISE ; KOLLIN NANCY DONALDSON ; MACE TAMARA LEE ; PROXMIRE DEBORAH LYNN ; SCHLINZ DANIEL ROBERT ; LEMAHIEU DAVID LEE ; JACKSON WANDA WALTON ; HANSON WILLIAM DUANE ; GRUBE VIOLET MAY ; GOSSEN BARBARA ANN

**Inventor(s):** (std): MACE TAMARA L ; MCCORMACK ANN L ; SCHLINZ DAVID R ; KELLENBERGER STANLEY R ; SZYMONSKI KRZYSZTOF A ; KURIJISUTOFU ANDOREJII SHIMONS ; YARBROUGH SANDRA MARIE ; LEMAHIEU DAVID K ; SHANNON K BYERLY ; DAVID G IWANSKI ; STANLEY R KELLENBERGER ; KRZYSZTOF ANDRZEJSZYMONSKI ; SANDRA M YARBROUGH ; PROXMIRE DEBORAH L ; JACKSON WANDA W ; KOLLIN NANCY D ; TAMARA L MACE ; CORMACK ANN L MC ; SCHLINZ DANIEL R ; BYERLY SHANNON KATHLEEN ; IWANSKI DAVID GERARD ; KELLENBERGER STANLEY ROY ; QIN JIAN ; SHIH SCHROEDER WEN HUEY ; SZYMONSKI KRZYSTOF ANDRZEJ ; TSAI CHUAN LING ; YARBROUGH SANDRA MARIE ; HANSON WILLIAM D ; BRUD LYNN C ; BYERLY SHANNON K ; ELLIS CLIFFORD J ; EVERETT ROB D ; GOSSEN BARBARA A ; GRUBE VIOLET M ; IWANSKI DAVID G ; LEMAHIEU DAVID L ; STEVENS ROBERT A ; WENTZEL TOM K ; YARBROUGH SANDRA M ; ZENKER DAVID L ; ZUNKER MARYANN ; PROXMIRE LYNN ; DEBORAH ; MARYANN ZUNKER ; JIAN QIN ; IWANSKI DAVID G ; ZENKER DAVID LOUIS ; WENTZEL TOM KARL ; STEVENS ROBERT ALAN ; LEMAHIEU DAVID LEE ; GRUBE VIOLET MAY ; GOSSEN BARBARA ANN ; EVERETT ROB DAVID ; ELLIS CLIFFORD JACKSON ; BRUD LYNN CAROL ; HANSON WILLIAM DUANE ; NANCY D KOLLIN ; JIAN KIN ; SANDRA MARIE YARBROU ; SUTANRII ROI KERENBAAGAA ; KRZYSZTOF ANDRZEJ SZYMONSKI ; ANN LOUISE MCCORMACK ; DANIEL R SCHLINZ ; TAMARA RII MEISU ; DEBORAH LYNN PROXMIRE ; DAVID LOUIS ZENKER ; CHIYUAN RIN TSUAI ; SANDRA MARIE YARBROUGH ; AN RUISU MAKOOMATSUKU ; WANDA UORUTON JIYAKUSON ; WANDA WALTON JACKSON ; SHIYANON KASARIIN BAIARII ; JIAN QUINROBERT ALAN STEVENS ; TAMARA LEE MACE ; NANCY DONALSON KOLLIN ; DEIBUITSUDO JIERAADO IWANSUKII ; UEN HIYUUI SHII SHIYUROODAA ; SANDORA MARII YAABUROO ; DAVID LEE LEMANIEU ; GERARD DAVID ; DEBORAH L PROXMIRE ; NANCY DONALDSON KOLLIN ; STANLEY ROY KELLENBERGER ; NANSHII DONARUDOSON KORIN ; KOLLIN NANCY DONALSON ; SZYMONSKI KRZYSZTOF ANDRZEJ ; SZYMONSKI KRZYSZTOF ANDRZEJ ; SZYMONSKI KRZYSZTOF ANDREU ; YOARBROUGH SANDRA MARIE ; QIN JIAN ; SHIH SCHROEDER WEN HUEY ; MCCORMACK ANN LOUISE ; MARY AND ZUNKER ; SADRA MARIE YARBROUGH ; TOM KARL WENTZEL ; ROBERT ALAN STEVENS ; JIAN QIN ; DAVID LEE LEMAHIEU ; DAVID GERARD IWANSKI ; VIOLET MAY GRUBE ; BARBARA ANN GOSSEN ; ROB DAVID EVERETT ; CLIFFORD JACKSON ELLIS ; SHANNON KATHLEEN BYERLY ; LYNN CAROL BRUD ; WILLIAM DUANE HANSON ; CHUAN LING TSAI ; WEN HUEY SHIH SCHROEDER ; SANDRA M ; ANN L MC CORMACK ; DAVID GERARD IWANSKI ; DANIERU ROBAATO SHIYURINTSU ; DEBORA RIN PUROKUSUMAIA ; WANDA W JACKSON ; SANDRA MARIE YARBROUGH ; DANIEL ROBERT SCHLINZ ; SCHLINZ DANIEL ROBERT ; MCCORMACK ANN LOUISE ; MACE TAMARA LEE ; KOLLIN NANCY DONALDSON ; JACKSON WANDA WALTON ; PROXMIRE DEBORAH LYNN ; SHIH SCHRODER WEN HUEY ; LEMATHIEU DAVID LEE

**Inventor(s):** DAVID LEE LEMATHIEU ; ANN LOUISE MCCORMACK ; LEMAHIEU DAVID LEE APPLETON WISCONSIN 54914 US ; HANSON WILLIAM DUANE NEENAH WISCONSIN 54956 US ; ELLIS CLIFFORD JACKSON

WOODSTOCK GEORGIA 30188 US ; EVERETT ROB DAVID NEENAH WI 54956 3946 US ; WENTZEL TOM KARL KIMBERLY WISCONSIN 54136 US ; GRUBE VIOLET MAY APPLETON WISCONSIN 54915 US ; STEVENS ROBERT ALAN APPLETON WISCONSIN 54911 US ; ZENKER DAVID LOUIS NEENAH WISCONSIN 54956 US ; GOSSEN BARBARA ANN NEENAH WISCONSIN 54956 US ; ZUNKER MARYANN OSHKOSH WISCONSIN 54901 US ; QIN JIAN APPLETON WISCONSIN 54911 US ; BRUD LYNN CAROL APPLETON WISCONSIN 54914 US ; MACE TAMARA LEE ALPHARETTA GEORGIA 30202 US ; MCCORMACK ANN LOUISE CUMMING GEORGIA 30130 US ; KOLLIN NANCY DONALDSON ROSWELL GEORGIA 30076 US ; SCHLINZ DANIEL ROBERT APPLETON WISCONSIN 54915 US ; JACKSON WANDA WALTON ALPHARETTA GEORGIA 30201 US ; PROXMIRE DEBORAH LYNN LARSEN WISCONSIN 54947 US ; WEN HUEY SHIN SCHROEDER ; KRZYSZTOF ANDREU SZYMONSKI ; SANDRA MARIE YOARBROUGH ; SHIH SCHROEDER WEN HUEY APPLETON WISCONSIN... ; SZYMONSKI KRZYSZTOF ANDRZEJ NEENAH WISCONSIN... ; BYERLY SHANNON KATHLEEN APPLETON WISCONSIN... ; KELLENBERGER STANLEY ROY APPLETON WISCONSIN 54911 US ; SHIH SCHROEDER WEN HUEY APPLETON WISCONSIN 54915 US ; SZYMONSKI KRZYSZTOF ANDRZEJ NEENAH WISCONSIN 54956 US ; SHIH SCHROEDER WEN HUEY APPLETON WISCONSIN 54915 U ; SZYMONSKI KRZYSZTOF ANDRZEJ NEENAH WISCONSIN 54956 ; YARBROUGH SANDRA MARIE APPLETON WISCONSIN 54914 US ; BYERLY SHANNON KATHLEEN APPLETON WISCONSIN 54914 U ; KELLENBERGER STANLEY ROY APPLETON WISCONSIN 54911 ; IWANSKI DAVID GERARD MENASHA WISCONSIN 54952 US ; TSAI CHUAN LING APPLETON WISCONSIN 54915 US ; QIN JIAN APPLETON WISCONSIN 54914 US ; BYERLY SHANNON KATHLEEN APPLETON WISCONSIN 54914 US

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

**Designated states:** BE DE ES FR GB IT NL SE

## 5) Family number: 53538659 (US2013102985A)

© PatBase

**Title:** ABSORBENT ARTICLE HAVING A DISCRETE PORTION

**Abstract:** An absorbent article can have a discrete portion formed from a web of material. The discrete portion can have any shape as desired. The absorbent article can have a second discrete portion which can also have any shape as desired. The shape of the second discrete portion can be the same as or different from the shape of the first discrete portion.

### Classifications:

**International (IPC 8-9):** A61F13/15 A61F13/45 A61F13/49

A61F13/496 A61F13/505 A61F13/551 A61F13/56

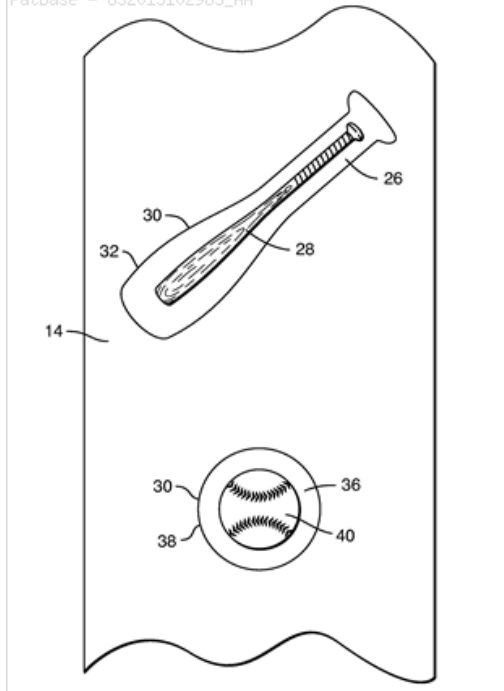
A61F13/84 (Advanced/Invention)

**CPC:** A61F13/15699 A61F13/15756 A61F13/5638 A61F2013/5055

A61F2013/8497 A61F13/505

**US:** 604/385.01

PatBase - US2013102985\_AA



### Family:

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AU2012324565 AA    | 20130425         | AU20120324565      | 20120827         |
| BR112014008615 A2  | 20170418         | BR20141108615      | 20120827         |
| CN103889382 A      | 20140625         | CN201280050668     | 20120827         |
| CO6940403 A2       | 20140509         | CO20140079761      | 20140411         |
| EP2768453 A1       | 20140827         | EP20120841635      | 20120827         |
| EP2768453 A4       | 20150701         | EP20120841635      | 20120827         |
| KR20140077924 A    | 20140624         | KR20147010235      | 20120827         |
| MX2014004536 A1    | 20140801         | MX20140004536      | 20120827         |
| RU2014118333 A     | 20151127         | RU20140118333      | 20120827         |
| US2013102985 AA    | 20130425         | US20110276669      | 20111019         |
| WO13057601 A1      | 20130425         | WO20121B54393      | 20120827         |

### Priority:

US20110276669 20111019 WO20121B54393 20120827

**Probable Assignee:** KIMBERLY CLARK CORP

**Assignee(s):** (std): DEBROUX JEFFREY ALAN ; DEMPSEY KIRK JON ; ELLINGSON DANIEL LEE ; KIMBERLY CLARK CO ; SCHROEDER ERIC LOUIS

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

**Inventor(s):** (std): DEBROUX JEFFREY ALAN ; SCHROEDER ERIC LOUIS ; ELLINGSON DANIEL LEE ; DEMPSEY KIRK JON ; JEFFREY ALAN DEBROUX ; ERIC LOUIS SCHROEDER ; KIRK JON DEMPSEY ; DANIEL LEE ELLINGSON

**Agent(s):** SPRUSON AND FERGUSON; J IAN RAISBECK; MABEY KATHERINE FRANCES; DRESSSEL SARAH ANN 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 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 PE PG PH PL PT QA RO RS RU RW 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

**6) Family number: 43550697** (US2009258210A) © PatBase

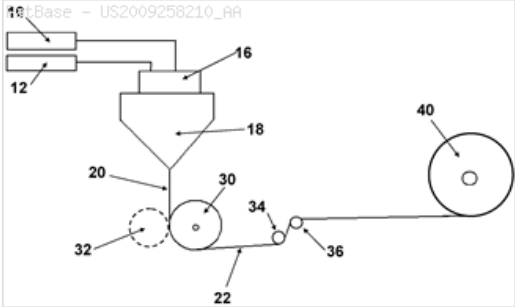
**Title:** ELASTOMERIC MATERIALS

**Abstract:** Some embodiments of the present invention include elastomeric films with a basis weight of about 40 gsm or less or about 25 gsm or less. Other embodiments include elastomeric laminates comprising the elastomeric film bonded to one or more substrates (such as nonwoven fabrics). Methods of the making the elastomeric films and elastomeric laminates are also provided.

**Classifications:**

**International (IPC 8-9):** A61F A61F13/15 A61F13/20 A61F13/49 A61F13/511 A61F13/514 A61F13/66 A61L15/24 B29C47/00 B29C47/02 B29C47/04 B29C47/06 B29C65/00 B32B B32B25/00 B32B25/04 B32B25/08 B32B25/10 B32B25/12 B32B25/14 B32B25/16 B32B25/18 B32B25/24 B32B27/08 B32B27/12 B32B27/20 B32B27/22 B32B27/28 B32B27/30 B32B27/32 B32B27/34 B32B27/36 B32B37/02 B32B37/15 B32B5/02 B32B5/06 B32B5/08 B32B5/22 B32B5/26 B32B7/12 C08J C08J5/18 C08L C08L23/00 C08L23/08 C08L23/14 C08L23/16 C08L51/06 C08L53/00 C08L53/02 (Advanced/Invention); A61F13/15 B29K21/00 B29K23/00 B29L7/00 B29L9/00 B32B27/08 B32B27/32 C08J5/18 C08L23/06 C08L23/12 (Advanced/Non-invention); A61F13/15 A61F13/20 B29C47/04 B32B25/00 B32B25/08 B32B27/12 B32B27/32 B32B37/02 B32B5/02 C08J5/18 C08L23/00 C08L23/08 (Core/Invention); B29C47/06 B29C65/00 B32B27/08 B32B5/22 C08J5/18 (Core/Non-invention); A61F B32B C08J C08L (Subclass/Invention)

**International (IPC 1-7):** A61F13/15 B32B25/08 B32B25/10 B32B25/14 B32B27/32 C08J5/18 C08L23/08  
**CPC:** A61F13/51478 B32B5/06 B32B25/042 B32B25/12 B32B25/18 B32B27/20 B32B27/22 B32B27/285 B32B27/302 B32B27/34 B32B27/36 B32B2262/0253 B32B2262/0261 B32B2262/0276 B32B2262/0292 B32B2262/04 B32B2262/062 B32B2274/00 B32B2307/726 C08L2666/06 C08L23/00 C08L2666/02 C08L2666/04 Y10T442/659 Y10T442/674 A61F13/15593 A61F13/4902 B32B25/08 B32B25/10 B32B25/16 B32B2270/00 B32B2555/02 A61F13/51121 A61F2013/51026 A61F2013/51023 A61F2013/51147 A61F2013/51165 A61F2013/51322 Y10T428/24942 Y10T428/273 A61F13/51464 A61F13/5148 B32B5/022 B32B5/08 B32B5/26 B32B7/12 B32B25/00 B32B27/08 B32B27/12 B32B27/30 B32B27/32 B32B27/322 B32B2262/12 B32B2307/51 B32B2307/54 B32B2307/718 B32B2555/00 C08L23/06 C08L23/0815 C08L23/12 C08L23/142 C08L23/16 C08L51/06 C08L53/00 C08L53/02 C08L53/025 C08L2205/02 Y10T428/24124 Y10T442/678  
**European:** A61F13/15M2B A61F13/49D2H A61F13/514B2 A61F13/514C2A B32B25/08 B32B25/10 B32B25/16 B32B27/02 B32B27/08 B32B27/12 B32B27/30 B32B27/32 B32B27/32A B32B5/26 B32B7/12 C08L23/08A1 C08L23/14A C08L23/16 C08L51/06 C08L53/00 C08L53/02B M08L205/02 M08L23/06 M08L23/08A1 M08L23/12 M08L23/14A  
**US:** 1/1 156/244.11 156/244.110S 156/73.1 156/73.100S 264/165 264/165S 428/113 428/113P 428/212 428/219 428/220 428/220P 428/341 442/381 442/381P 442/394 442/394S 442/398 604/365 604/365P 604/367 604/367S 604/370 604/385.23 604/385.230S



**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AR070247 AA        | 20100325         | AR2009P100219      | 20090123         |
| AU2009206346 AA    | 20090730         | AU20090206346      | 20090123         |
| AU2009206346 BB    | 20150226         | AU20090206346      | 20090123         |
| AU2009206370 AA    | 20090730         | AU20090206370      | 20090123         |
| AU2009206370 BB    | 20121004         | AU20090206370      | 20090123         |
| AU2009338132 AA    | 20100729         | AU20090338132      | 20090722         |
| AU2009338132 BB    | 20130808         | AU20090338132      | 20090722         |
| BRPI0906420 A2     | 20150714         | BR2009PI06420      | 20090123         |
| BRPI0906757 A2     | 20150818         | BR2009PI06757      | 20090123         |
| CA2712517 AA       | 20090730         | CA20092712517      | 20090123         |
| CA2712517 C        | 20151222         | CA20092712517      | 20090123         |
| CA2712781 A        | 20100721         | CA20092712781      | 20090123         |
| CA2712781 C        | 20130702         | CA20092712781      | 20090123         |
| CA2750360 AA       | 20110721         | CA20092750360      | 20090722         |
| CA2813544 AA       | 20090730         | CA20092813544      | 20090123         |
| CL2009000140 A1    | 20100405         | CL20090000140      | 20090123         |
| CL2011001783 A1    | 20111216         | CL20110001783      | 20110722         |
| CL50746 B          | 20150313         | CL20090000140      | 20090123         |
| CN101951863 A      | 20110119         | CN200980103098     | 20090123         |
| CN101951863 B      | 20140528         | CN200980103098     | 20090123         |
| CN101977577 A      | 20110216         | CN200980109541     | 20090123         |
| CN101977577 B      | 20140917         | CN200980109541     | 20090123         |
| CN102292056 A      | 20111221         | CN200980155237     | 20090722         |
| CN102292056 B      | 20140416         | CN200980155237     | 20090722         |
| CO6290613 A2       | 20110620         | CO20100104125      | 20100824         |
| CR11586 A          | 20110128         | CR20100011586      | 20100723         |
| DE602009026928 D1  | 20141113         | DE200960026928T    | 20090123         |
| DE602009030740 D1  | 20150528         | DE200960030740T    | 20090123         |
| EA021791 B1        | 20150930         | EA20100070879      | 20090123         |
| EA201070879 A1     | 20110228         | EA20100070879      | 20090123         |
| EP2234571 A1       | 20101006         | EP20090704574      | 20090123         |
| EP2242465 A1       | 20101027         | EP20090703318      | 20090123         |
| EP2242465 B1       | 20141001         | EP20090703318      | 20090123         |
| EP2381908 A1       | 20111102         | EP20090790719      | 20090722         |

|                 |          |                |          |
|-----------------|----------|----------------|----------|
| EP2381908 B1    | 20190619 | EP20090790719  | 20090722 |
| EP2612638 A1    | 20130710 | EP20130155905  | 20090123 |
| EP2612638 B1    | 20150415 | EP20130155905  | 20090123 |
| ES2535926 T3    | 20150519 | ES20130155905T | 20090123 |
| HK1149890 A1    | 20150703 | HK20110104174  | 20110427 |
| HK1149890 A1    | 20111021 | HK20110104174  | 20110427 |
| HK1149890 B     | 20150703 | HK20110104174  | 20110427 |
| HU025040 T2     | 20160128 | HU20130155905T | 20090123 |
| IL207101 A0     | 20101230 | IL20090207101  | 20090123 |
| IN04481DN2010 A | 20101126 | IN2010DN04481  | 20100621 |
| IN04630DN2011 A | 20120420 | IN2011DN04630  | 20110616 |
| IN05325DN2010 A | 20110225 | IN2010DN05325  | 20100723 |
| JP2011514178 T2 | 20110506 | JP20100544437T | 20090123 |
| JP2011514391 T2 | 20110506 | JP20100544430T | 20090123 |
| JP2012515610 T2 | 20120712 | JP20110547915T | 20090722 |
| JP2013230696 A2 | 20131114 | JP20130162188  | 20130805 |
| JP5101708 B2    | 20121219 | JP20100544437T | 20090123 |
| JP5475012 B2    | 20140416 | JP20110547915T | 20090722 |
| JP5674475 B2    | 20150225 | JP20100544430T | 20090123 |
| JP5739490 B2    | 20150624 | JP20130162188  | 20130805 |
| KR101606216 B1  | 20160324 | KR20107018507  | 20090123 |
| KR20100112178 A | 20101018 | KR20107018507  | 20090123 |
| MA32077 B1      | 20110201 | MA20100033083  | 20100813 |
| MX2010007861 A1 | 20101112 | MX20100007861  | 20090123 |
| MX2010008067 A1 | 20100810 | MX20100008067  | 20090123 |
| MX2011007575 A1 | 20110928 | MX20110007575  | 20090722 |
| NZ586914 A      | 20120727 | NZ20090586914  | 20090123 |
| RU2010125313 A  | 20120320 | RU20100125313  | 20090123 |
| RU2011123105 A  | 20121220 | RU20110123105  | 20090722 |
| RU2474406 C2    | 20130210 | RU20100125313  | 20090123 |
| RU2492840 C2    | 20130920 | RU20110123105  | 20090722 |
| SG173084 A1     | 20110829 | SG20110052727  | 20090722 |
| SG187481 A1     | 20130228 | SG20130003405  | 20090123 |
| SV2010003633 A  | 20110728 | SV20100003633  | 20100722 |
| TH111749 A      | 20120130 | TH20091000272  | 20090123 |
| TN2010000347 A1 | 20111229 | TN20100000347  | 20100723 |
| TR201506543 T4  | 20150622 | TR20150006543T | 20090123 |
| TW200940332 A   | 20091001 | TW20090103103  | 20090123 |
| TWI476102 B     | 20150311 | TW20090103103  | 20090123 |
| US2009258210 AA | 20091015 | US20090358533  | 20090123 |
| US2009264844 AA | 20091022 | US20090358962  | 20090123 |
| US2010040826 AA | 20100218 | US20090507434  | 20090722 |
| US2012184169 AA | 20120719 | US20120431026  | 20120327 |
| US2013237938 AA | 20130912 | US20130868163  | 20130423 |
| US2014242360 AA | 20140828 | US20140255374  | 20140417 |
| US2016015576 AA | 20160121 | US20150867046  | 20150928 |
| US8168853 BB    | 20120501 | US20090358962  | 20090123 |
| US8445744 BB    | 20130521 | US20090507434  | 20090722 |
| US9169384 BB    | 20151027 | US20120431026  | 20120327 |
| US9327477 BB    | 20160503 | US20090358533  | 20090123 |
| US9669606 BB    | 20170606 | US20140255374  | 20140417 |
| US9895275 BB    | 20180220 | US20130868163  | 20130423 |
| WO09094506 A1   | 20090730 | WO2009US31779  | 20090123 |
| WO09094530 A1   | 20090730 | WO2009US31822  | 20090123 |
| WO10085280 A1   | 20100729 | WO2009US51382  | 20090722 |
| ZA201004486 A   | 20131223 | ZA20100004486  | 20100624 |
| ZA201005294 A   | 20110428 | ZA20100005294  | 20100723 |
| ZA201104427 A   | 20141126 | ZA20110004427  | 20110614 |

**Priority:**

|                |          |               |          |               |          |
|----------------|----------|---------------|----------|---------------|----------|
| US20080023107P | 20080124 | US20080023107 | 20080124 | CA20092712781 | 20090123 |
| CA20092813544  | 20090123 | EP20090703318 | 20090123 | JP20100544430 | 20090123 |
| EP20130155905  | 20090123 | US20090358533 | 20090123 | US20090358962 | 20090123 |
| JP20100544430T | 20090123 | WO2009US31822 | 20090123 | WO2009US31779 | 20090123 |
| US20090507430T | 20090722 | WO2009US51382 | 20090722 | US20120431026 | 20120327 |
| US20130868163  | 20130423 | CA20132712781 | 20130507 | US20140255374 | 20140417 |
| US20150867046  | 20150928 |               |          |               |          |

**Probable Assignee:** BERRY FILM PRODUCTS CO INC

**Assignee(s):** (std): AUTRAN JEAN PHILIPPE ; AUTRAN JEAN PHILIPPE MARIE ; BLAND DAVID G ; CANCIO LEOPOLDO V ; CLOPAY PLASTIC PROD CO ; MUSLET IYAD ; MUSLAT IYAD ; CLOPAY PLASTICS PRODUCTS CO INC ; CLOPAY PLASTICS PRODUCTS COMPA ; MANSFIELD TODD LEON ; CLOPAY PLASTIC PRODUCTS CO INC ; PROCTER AND GAMBLE ; NETON JANET ; PROCTER AND GAMBLE CO ; MUSLET LYAD ; CLOPLAY PLASTIC PRODUCTS CO INC

**Assignee(s):** CREDIT SUISSE CAYMAN ISLANDS BRANCH AG ; THE PROCTER AND GAMBLE COMPANY ; PROCTER AND GAMBLE CO ; THE PROCTOR AND GAMBLE COMPANY ; US BANK NATIONAL ASSOCIATION ; US BANK NATIONAL ASSOCIATION COLLATERAL AGENT AS ; JPMORGAN CHASE BANK NA ADMINISTRATIVE AGENT AS ; DZE PROKTER EHND GEHMBL KOMPANI ; CLOPAY PLASTIC PRODUCTS CO LLC ; CLOPAY PLASTIC PRODUCTS CO INC MASON ; CLOPAY PLASTICS PRODUCTS COMPANY INC ; CLOPAY PLASTIC PRODUCTS COMPANY INC ; BANK OF AMERICA NA ; BERRY FILM PRODUCTS CO INC

**Inventor(s):** (std): BLAND DAVID ; AUTRAN JEAN PHILIPPE MARIE ; MARIE AUTRAN JEAN PHILIPPE ; JANET NETON ; IYAD MUSLAT ; LEON MANSFIELD TODD ; LYAD MUSLET ; NETON DZHANET ; KEHNSIO LEOPOLD DO V ; MUSLET LUEHD ; AUTRAN ZHAN FILIPP MARI ; BLEHND DEHVID G ; MEHNSFILD TODD LEON ; JEAN PHILLIPPE MARIE AUTRAN ; AUTRAN JR JEAN PHILIPPE MARIE ; DAVID G BLAND ; LEOPOLDO V CANCIO ; MUSLET IYAD ; CANCIO LEOPOLDO V ; BLAND DAVID G ; AUTRAN JEAN PHILIPPE ; BLEHND

DEHVID DZH ; KANCHIO LEOPOLDO V ; AUTRAN ZHAN FILIPPE MARI ; MUSLAT IYAD ; IYAD MUSLET ; NETON JANET ; MANSFIELD TODD LEON ; MUSLET LYAD ; MUSLAT JJAD ; AUTRAN JEAN PHILIPPE MAIRE

**Inventor(s):** AUTRAN ZHAN-FILIPPE MARI ; JEAN PHILIPPE MARIE AUTRAN ; JEAN PHILIPPE AUTRAN ; CANCIO LEOPOLDO ; MUSLET, Iyad ; TODD LEON MANSFIELD ; CANCIO LEOPOLDO V VERO BEACH ; BLAND DAVID G MASON ; AUTRAN JEAN PHILIPPE MARIE CINCINNATI ; MUSLET IYAD MASON ; IYAD MUSLET DAVID G BLAND LEOPOLDO V CANCIO ; AUTRAN JEANPHILIPPE MARIE

**Agent(s):** SPRUSON AND FERGUSON; WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; MACRAE AND CO; DIMOCK STRATTON LLP; WILSON LUE LLP; BARROS; LLOVET AHUMADA RAUL; LUZ CLEMENCIA DE PAEZ; 2K PATENTANWALTE BLASBERG KEWITZ AND REICHEL PARTNERSCHAFT MBB; KREMER VERONIQUE MARIE JOSEPHINE; FINDLAY ALICE ROSEMARY; L HUIILLIER FLORENT CHARLES; PONTI ADELAIDA; CLT PATENT AND TRADEMARK HK LTD; MARKS AND CLERK SINGAPORE LLP; EVIN KAZMIRCI; WOOD HERRON AND EVANS LLP; THE PROCTER AND GAMBLE COMPANY,GLOBAL LEGAL DEPARTMENT - IP; PROCTER AND GAMBLE CO GLOBAL LEGAL DEPARTMENT IP; RICHARD L; KATHLEEN Y; THOMPSON HINE LLP; JAMES T; LUNN GREGORY J; THE PROCTER AND GAMBLE COMPANY

**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 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 PE 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

**7) Family number: 28677850** (US2001048991A)

© PatBase

**Title:** COMPOSITIONS FOR FLEXIBLE OPTICAL MEDIA DISCS

**Abstract:** The present invention is related to flexible information-carrying substrates, such as optical media discs, which can withstand the stresses of being handled, processed and deformed, yet maintain enough integrity and properties such that it can still be read without the use of a rigid adapter.

**Classifications:**

**International (ipc 8-9):** B32B27/00 A41D13/00 A41D31/00 A43B13/14 A61F13/15 A61F13/49 A61F13/511 A61F13/514 A61F13/53 A61F5/44 A61L15/58 A61L15/60 B29C35/08 B32B27/24 C08F297/00 C08F297/04 C08F8/04 C08J5/00 C08J7/00 C08J9/12 C08K3/28 C08K3/32 C08K5/13 C08K5/16 C08K5/3492 C08L101/00 C08L23/08 C08L23/16 C08L51/00 C08L51/06 C08L53/00 C08L53/02 C09D153/02 D04B1/18 D04B21/16 D04H1/56 D04H3/16 D06L1/04 D06L3/00 D06L3/08 D06M10/00 D06M101/20 D06M11/00 D06M11/07 D06M11/30 D06M11/38 D06M11/40 D06M11/50 D06M13/08 (Advanced/Invention); A41D13/00 A41D31/00 A61F13/15 A61F5/44 C08J5/00 C08J7/00 C08L101/00 C08L53/02 D04H3/16 D06M101/20 G01N33/36 (Advanced/Non-invention); A41D13/00 A41D31/00 A61F13/15 A61F5/44 A61L15/16 C08F297/00 C08F8/00 C08J5/00 C08J7/00 C08J9/00 C08L101/00 C08L51/00 C08L53/00 D04H3/16 (Core/Invention); B32B C08F C08L (Subclass/Invention)

**International (ipc 1-7):** A41D13/00 A41D31/00 A43B13/14 A61F13/15 A61F13/49 A61F13/511 A61F13/514 A61F13/53 A61F5/44 A61L15/58 A61L15/60 B29C35/08 B32B B32B B32B15/00 B32B27/00 B32B27/24 B32B3/02 C08C19/02 C08F C08F236/10 C08F297/00 C08F297/04 C08F36/00 C08F8/00 C08F8/02 C08F8/04 C08F8/42 C08J3/00 C08J3/28 C08J5/00 C08J7/00 C08J9/12 C08K 5/16 C08K3/00 C08K3/32 C08K5/13 C08K5/16 C08K5/34 C08K5/3492 C08K5/41 C08L101/00 C08L23/08 C08L23/16 C08L51/00 C08L51/06 C08L53/00 C08L53/02 C25D1/00 D04H1/56 D04H3/16 D06L1/04 D06M10/00 D06M11/00 D06M11/30 D06M11/40 D06M11/50 D06M13/08 G11B5/66

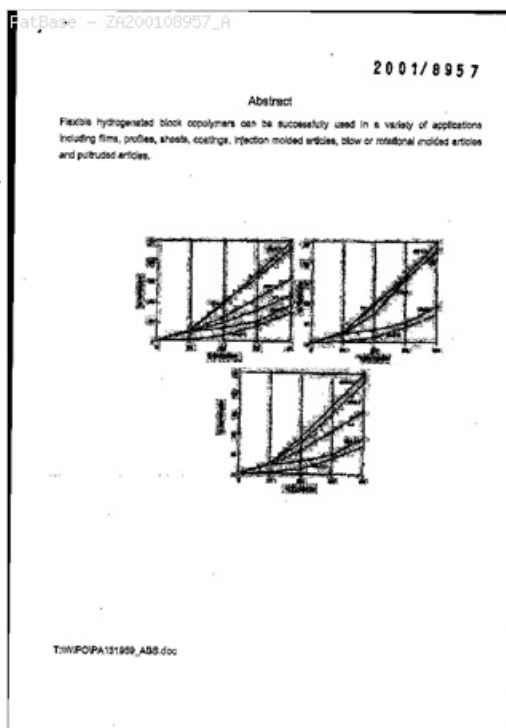
**CPC:** D04B1/18 C08F297/04 C09D153/02 C09D153/025 A61F13/4902 D01F6/42 D01F6/56 D02G3/32 D03D15/08 Y10T428/2913 Y10T428/2915 Y10T428/2933 C08F8/04 Y10T428/12694 Y10T442/2861 D04B21/16 D06M11/30 D06M11/40 D06M11/50 D06M13/08 G01N33/36 C08L51/06 C08L53/025 D01F6/30

**European:** A61F13/49D2H C08F297/04 C08F8/04 C08L51/06 C08L53/02B C09D153/02 C09D153/02B D01F6/42 D01F6/56 D02G3/32 D03D15/08 D04B1/18 D04B21/16 D06M11/30 D06M11/40 D06M11/50 D06M13/08 S01N33/36

**US:** 264/488 428/364 428/365 428/375 428/64.2 428/64.200P 428/64.3 428/644 428/644S 428/848.9 428/848.900S 442/164 442/164P 522/112 522/153 522/154 522/157 522/158 522/159 522/160 522/161 522/75 522/75P 522/76 522/78 522/79 522/82 524/156 524/157 524/158 524/161 524/186 524/376 524/379 524/394 524/505 524/543 524/81 525/271 525/313 525/314 525/316 525/332.1 525/332.9 525/332.900P 525/333.3 525/338 525/338S 525/88 525/88P 525/88S 525/89 525/89S 525/92.00C 525/92.00R 525/92C 525/92R 525/93 525/93P 525/98 525/99 8/101 8/107 8/108.1 8/115.51 8/115.52 8/115.520P 8/115.6 8/115.69 8/115.690S 8/125 8/125S 8/142 8/142S 8/537 8/537S

**Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AR024320 AA        | 20020925         | AR2000P102842      | 20000607         |
| AR024970 AA        | 20021030         | AR2000P103897      | 20000727         |
| AR025086 AA        | 20021106         | AR2000P104114      | 20000809         |
| AR025172 AA        | 20021113         | AR2000P102843      | 20000607         |
| AT265497 E         | 20040515         | AT20000941131T     | 20000519         |
| AT297443 E         | 20050615         | AT20000936127T     | 20000519         |
| AT510885 E         | 20110615         | AT20000953757T     | 20000728         |
| AU2000266138 AA    | 20011120         | AU20000266138      | 20000728         |
| AU200051488 A1     | 20010102         | AU20000051488      | 20000519         |
| AU200051488 A5     | 20010102         | AU20000051488D     | 20000519         |
| AU200055881 A1     | 20010102         | AU20000055881      | 20000519         |
| AU200055881 A5     | 20010102         | AU20000055881D     | 20000519         |
| AU200066138 A1     | 20011120         | AU20000066138      | 20000728         |
| AU200066138 A5     | 20011120         | AU20000066138      | 20000728         |
| AU200066154 A1     | 20010219         | AU20000066154      | 20000728         |



|                 |          |                |          |
|-----------------|----------|----------------|----------|
| AU200066154 A5  | 20010219 | AU20000066154D | 20000728 |
| AU2001249807 AA | 20020313 | AU20010249807  | 20010403 |
| AU2001259037 AA | 20011203 | AU20010259037  | 20010403 |
| AU200159037 A1  | 20011203 | AU20010059037  | 20010403 |
| AU200159037 A5  | 20011203 | AU20010059037  | 20010403 |
| AU2003218113 AA | 20030929 | AU20030218113  | 20030311 |
| AU773545 B2     | 20040527 | AU20000066154  | 20000728 |
| BRPI0012087 A   | 20020402 | BR2000PI12087  | 20000519 |
| BRPI0012219 A   | 20020507 | BR2000PI12219  | 20000519 |
| BRPI0013064 A   | 20020402 | BR2000PI13064  | 20000728 |
| CA2377553 AA    | 20011217 | CA20002377553  | 20000728 |
| CA2406666 AA    | 20021021 | CA20002406666  | 20000728 |
| CN100564659 C   | 20091202 | CN20038008094  | 20030311 |
| CN1142214 C     | 20040317 | CN20008008806  | 20000519 |
| CN1171913 C     | 20041020 | CN20008008811  | 20000519 |
| CN1215936 C     | 20050824 | CN20008010904  | 20000728 |
| CN1300244 C     | 20070214 | CN20008019504  | 20000728 |
| CN1355826 A     | 20020626 | CN20008008806  | 20000519 |
| CN1355827 A     | 20020626 | CN20008008811  | 20000519 |
| CN1365378 A     | 20020821 | CN20008010904  | 20000728 |
| CN1505660 A     | 20040616 | CN20008019504  | 20000728 |
| CN1646759 A     | 20050727 | CN20038008094  | 20030311 |
| CZ20020339 A3   | 20020717 | CZ20020000339  | 20000728 |
| CZ305579 B6     | 20151223 | CZ20020000339  | 20000728 |
| DE60010260 D1   | 20040603 | DE20006010260T | 20000519 |
| DE60010260 D1   | 20040603 | DE20006010260  | 20000519 |
| DE60010260 T2   | 20050707 | DE20006010260T | 20000519 |
| DE60020710 D1   | 20050714 | DE20006020710  | 20000519 |
| DE60020710 D1   | 20050714 | DE20006020710T | 20000519 |
| DE60020710 T2   | 20060316 | DE20006020710T | 20000519 |
| DE60046015 D1   | 20110707 | DE20006046015  | 20000728 |
| EP1189988 A1    | 20020327 | EP20000941131  | 20000519 |
| EP1189988 B1    | 20040428 | EP20000941131  | 20000519 |
| EP1198516 A1    | 20020424 | EP20000936127  | 20000519 |
| EP1198516 B1    | 20050608 | EP20000936127  | 20000519 |
| EP1208157 A1    | 20020529 | EP20000953757  | 20000728 |
| EP1208157 B1    | 20110525 | EP20000953757  | 20000728 |
| EP1280856 A1    | 20030205 | EP20000953740  | 20000728 |
| EP1299428 A2    | 20030409 | EP20010932519  | 20010403 |
| EP1485531 A1    | 20041215 | EP20030714099  | 20030311 |
| JP2003502470 T2 | 20030121 | JP20010503941T | 20000519 |
| JP2003502471 T2 | 20030121 | JP20010503942T | 20000519 |
| JP2003506513 T2 | 20030218 | JP20010514037T | 20000728 |
| JP2003534412 T2 | 20031118 | JP20010587011T | 20010403 |
| JP2004501232 T2 | 20040115 | JP20010582438T | 20000728 |
| KR100650304 B1  | 20061128 | KR20027001200  | 20000728 |
| KR100694747 B1  | 20070314 | KR20027014900  | 20000728 |
| KR20020026554 A | 20020410 | KR20027001200  | 20000728 |
| KR20030021158 A | 20030312 | KR20027014900  | 20000728 |
| MXPA02000981 A1 | 20020730 | MX2002PA00981  | 20000728 |
| MXPA02011021 A1 | 20030310 | MX2002PA11021  | 20000728 |
| MY122276 A      | 20060429 | MY20000003511  | 20000801 |
| NO20020407 A    | 20020326 | NO20020000407  | 20020125 |
| NO20020407 A0   | 20020125 | NO20020000407  | 20020125 |
| NO20020407 L    | 20020326 | NO20020000407  | 20020125 |
| TH49681 A       | 20020228 | TH20001001994  | 20000605 |
| TH50083 A       | 20020315 | TH20001001993  | 20000605 |
| TH50550 A       | 20020409 | TH20001002792  | 20000727 |
| TH54146 A       | 20021129 | TH20001002896  | 20000802 |
| TW200304516 A   | 20031001 | TW20030105258  | 20030311 |
| TW506990 B      | 20021021 | TW20000110798  | 20000602 |
| TWI231306 B     | 20050421 | TW20000115511  | 20000825 |
| TWI272287 B     | 20070201 | TW20000115014  | 20000729 |
| TWI294939 B     | 20080321 | TW20030105258  | 20030311 |
| US2001048991 AA | 20011206 | US20000728200  | 20001130 |
| US2002061981 AA | 20020523 | US20010943925  | 20010831 |
| US2002061982 AA | 20020523 | US20010944423  | 20010831 |
| US2002147273 AA | 20021010 | US20010006082  | 20011206 |
| US2003060529 AA | 20030327 | US20020192223  | 20020710 |
| US2003119971 AA | 20030626 | US20020308429  | 20021202 |
| US2003144418 AA | 20030731 | US20020304146  | 20021125 |
| US2005164577 AA | 20050728 | US20030507231  | 20030311 |
| US2010024134 AA | 20100204 | US20090472739  | 20090805 |
| US6426390 BA    | 20020730 | US20000726864  | 20001130 |
| US6437014 BA    | 20020820 | US20000627534  | 20000728 |
| US6777082 BB    | 20040817 | US20010006082  | 20011206 |
| US6803014 BB    | 20041012 | US20020192223  | 20020710 |
| US6815475 BB    | 20041109 | US20020308429  | 20021202 |
| US6914091 BB    | 20050705 | US20020304146  | 20021125 |
| US7727286 BB    | 20100601 | US20090472739  | 20090805 |
| WO0077094 A1    | 20001221 | WO2000US13898  | 20000519 |

|               |           |               |           |
|---------------|-----------|---------------|-----------|
| WO0073995 A1  | 200010201 | WO2000US13898 | 200005128 |
| WO0185843 A1  | 20011115  | WO2000US20711 | 20000728  |
| WO0190201 A2  | 20011129  | WO2001US10771 | 20010403  |
| WO0190201 A3  | 20020523  | WO2001US10771 | 20010403  |
| WO0218491 A1  | 20020307  | WO2001US10772 | 20010403  |
| WO03078723 A1 | 20030925  | WO2003US07592 | 20030311  |
| ZA200108808 A | 20021025  | ZA20010008808 | 20011025  |
| ZA200108957 A | 20021030  | ZA20010008957 | 20011030  |

#### Priority:

|                |          |                |          |                |          |
|----------------|----------|----------------|----------|----------------|----------|
| US19990139075  | 19990611 | US19990139074P | 19990611 | US19990139075P | 19990611 |
| US19990146008  | 19990728 | US19990146008P | 19990728 | US20000193313  | 20000330 |
| US20000193313P | 20000330 | US20000197161P | 20000413 | US20000197161P | 20000413 |
| US20000203558P | 20000511 | US20000575062  | 20000519 | WO2000US13898  | 20000519 |
| US20000575063  | 20000519 | WO2000US13900  | 20000519 | EP20000953757  | 20000728 |
| US20000627727  | 20000728 | US20000627534  | 20000728 | WO2000US20711  | 20000728 |
| WO2000US20826  | 20000728 | WO2000US20826  | 20000728 | US20000229079P | 20000830 |
| US20000728200  | 20001130 | US20000726864  | 20001130 | WO2001US10772  | 20010403 |
| WO2001US10771  | 20010403 | US20010943925  | 20010831 | US20010944423  | 20010831 |
| US20010006082  | 20011206 | KR20027001200  | 20020128 | US20020363127P | 20020311 |
| US20020192223  | 20020710 | WO2000US20711  | 20021107 | US20020304146  | 20021125 |
| US20020308429  | 20021202 | US20030507231  | 20030311 | WO2003US07592  | 20030311 |
| US20040507231  | 20040909 | US20090472739  | 20090805 |                |          |

#### Probable Assignee: USI CORP

**Assignee(s):** (std): DOW GLOBAL TECHNOLOGIES LLC ; ESNEAULT CALVIN P ; DOW GLOBAL TECHNOLOGIES INC ; DOW CHEMICAL CO ; DOW CHEMICAL INT CO LTD ; HO THOI H ; PATEL RAJEN M ; REID RONA L ; MAUGANS REXFORD A ; THE DOW CHEMICAL COMPANY ; HAHN STEPHEN F ; DOW GLOBAL TECHNOLOGY INC ; DOW GLOBLE TECHNOLOGY ; DOW GLOBAL TECHNOLOGY CORP ; BATISTINI ANTONIO ; BENSASON SELIM ; WALSH LEONIE K ; USI CORP ; CHUM PAK WING S

**Assignee(s):** DONALD ROBERT J ; BHATTACHARJEE DEBKUMAR ; DOW EUROPE GMBH ; THE DOW CHEMICAL CO ; THE DOW GLOBLE TECHNOLOGY ; THE DOW GLOBAL TECHNOLOGY CORP ; MARTIN HENRI LUC ; JONES MARY ANN ; HAHNFELD JERRY L ; PARSONS GARY D ; PATE JAMES E ; PHIPPS LAURA M ; HOUCHENS KIMBERLY S

**Inventor(s):** (std): HOUCHENS KIMBERLY S ; CHUM PAK WING S ; REID RONA L ; PATEL RAJEN M ; BENSASON SELIM ; HO THOI H ; WALSH LEONIE K ; HAHN STEPHEN F ; MAUGANS REXFORD A ; ESNEAULT CALVIN P ; HAHNFELD JERRY L ; JONES MARY ANN ; BERGLUND CHARLES A ; PARSONS GARY D ; LEIBIG CORA M ; DONALD ROBERT J ; PHIPPS LAURA M ; PATE JAMES E ; BHATTACHARJEE DEBKUMAR ; CHUM PAK WING STEVE ; MARTIN HENRI LUC ; PATE JAMES E III ; ESNEALT CALVIN P ; BATISTINI ANTONIO ; STEPHEN F HAHN ; PATE III JAMES E ; DONALD R J ; HAHNFELD J L ; PARSONS G D ; PATEL R M ; HAHN S F ; CHUM P W S ; SELIM BENSASON ; ANTONIO BATISTINI ; LAURA M PHIPPS ; DEBKUMAR BHATTACHARJEE ; RJ DONALD ; RAJEN M PATEL ; P WS CHUM ; PATEL RAJEN M AND ; REXFORD A MAUGANS ; THOI H HO ; GARY D PARSONS ; CALVIN P ESNEAULT ; GD PARSONS ; JL HAHNFELD ; JAMES E PATE ; PAK WING S CHUM ; JERRY L HAHNFELD ; LEONIE K WALSH ; ROBERT J DONALD ; CHUM PAK WING ; RM PATEL ; SF HAHN ; CALVIN P ESNEALT ; LEONIE HOUCHENS KIMBERLY S HO ; PHIPPS M ; HAHNFELD L ; PATE E ; ESNEAULT P ; HAHN F ; PARSONS D ; DONALD J ; PATEL M ; HAHN STEPHEN ; HO THOI ; WALSH LEONIE ; MAUGANS REXFORD ; PATEL RAJEN ; ESNEAULT CALVIN ; RONA L REID ; HOI THOI H

**Inventor(s):** REID RONA ; ESNEAULT CALVIN P BATON ROUGE ; HO THOI H LAKE JACKSON ; CHUM PAK WING S LAKE JACKSON ; HAHN STEPHEN F MIDLAND ; BENSASON SELIM HOUSTON ; MAUGANS REXFORD A LAKE JACKSON ; WALSH LEONIE K HOUSTON ; PATEL RAJEN M LAKE JACKSON ; THOI H HOI ; H THOI H HO ; M RAJEN M PATEL ; L RONA L REID ; PAK-WING S. CHUM ; SELLM BENSASON ; KIMBERLY S. HOUCHENS ; MARY ANN JONES ; HENRI LUC MARTIN ; JAMES E PATE III ; CHARLES A BERGLUND ; CORA M LEIBIG ; J L HAHNFELD ; R J DONALD ; G D PARSONS ; S F HAHN ; P W S CHUM ; R M PATEL ; MAUGANS REXFORD A AND ; HOUCHENS KIMBERLY S HO THOI H PATEL RAJEN M REID R ; PATE ; III JAMES E

**Agent(s):** PHILLIPS ORMONDE FITZPATRICK; SMART AND BIGGAR; CASALONGA AND PARTNERS; RAYNOR JOHN; THE DOW CHEMICAL COMPANY, INTELLECTUAL PROPERTY SECTION; DOW CHEMICAL CO INTELLECTUAL PROPERTY SECTION; THE DOW CHEMICAL COMPANY; DOW CHEMICAL CO

**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 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 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 YU ZA ZM ZW

#### 8) Family number: 59343949 (US2016251788A)

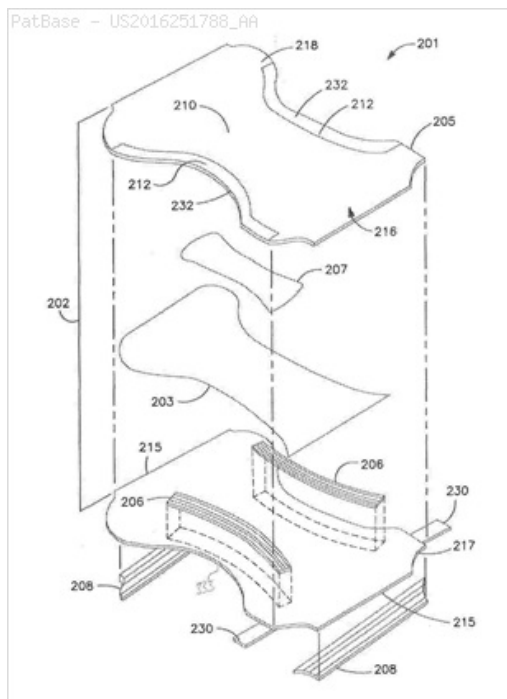
© PatBase

**Title:** SOFT AND DURABLE NONWOVEN COMPOSITE

**Abstract:** A nonwoven composite that contains a first nonwoven web positioned adjacent to a second nonwoven web is provided. The first nonwoven web contains a plurality of fibers that are formed from a first polyolefin composition, and the second nonwoven web contains a plurality of fibers that are formed from a second polyolefin composition. The first polyolefin composition contains an ethylene polymer, which and car; provide a soft feel to a surface of the first nonwoven web. The second polyolefin composition likewise contains a rigid propylene polymer, which can provide good strength and durability to the second nonwoven web. The second polyolefin composition also contains a ductile propylene polymer and a fatty acid derivative.

#### Classifications:

**International (IPC 8-9):** A61F13/00 A61F13/49 A61F13/51  
A61F13/514 B32B27/12 B32B27/32 D04H1/00 D04H1/4291  
D04H1/4374 D04H3/007 (Advanced/Invention)  
**CPC:** D04H3/007 D10B2509/026 A61F13/00 A61F2013/51026  
D04H1/4291 A61F13/51 D04H1/4374 A61F13/51478 A61F13/5148  
B32B27/12 B32B27/32 B32B27/327 B32B5/022 B32B5/08 B32B5/26  
B32B7/12 B32B27/302 B32B27/304 B32B27/322 B32B27/34  
B32B27/36 B32B2250/02 B32B2250/03 B32B2250/20 B32B2250/40  
B32B2262/0253 B32B2307/50 B32B2307/546 B32B2307/554  
B32B2307/718 B32B2432/00 B32B2439/46 B32B2535/00  
B32B2555/00 B32B2555/02 B32B7/05  
**US:** 1/1 442/382



# **Family:**

| Publication number | Publication date | Application number | Application date |
|--------------------|------------------|--------------------|------------------|
| AR098469 AA        | 20160526         | AR2014P104343      | 20141119         |
| AU2014351466 AA    | 20160630         | AU20140351466      | 20141118         |
| AU2014351466 BB    | 20181129         | AU20140351466      | 20141118         |
| BR112016011370 A2  | 20170808         | BR20161111370      | 20141118         |
| CN106795670 A      | 20170531         | CN201480062650     | 20141118         |
| CO16155837 A2      | 20161031         | CO20160155837      | 20160614         |
| EP3071740 A1       | 20160928         | EP20140863365      | 20141118         |
| EP3071740 A4       | 20170816         | EP20140863365      | 20141118         |
| KR20160086896 A    | 20160720         | KR20167015666      | 20141118         |
| MX2016006439 A1    | 20160719         | MX20160006439      | 20141118         |
| US2016251788 AA    | 20160901         | US20140028953      | 20141118         |
| WO15075631 A1      | 20150528         | WO2014IB66133      | 20141118         |

## **Priority:**

US20130906535P 20131120      US20140028953 20141118      WO2014IB66133 20141118

**Probable Assignee:** KIMBERLY CLARK CORP

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

**Inventor(s):** (std): POTNIS PRASAD S ; KUELIAN MARK GILBERT ; HUANG LEI ; POTNIS PRASAD ; KUELIAN MARK G ; PRASAD S POTNIS ; MARK GILBERT KUELIAN ; LEI HUANG

**Agent(s):** MADDEN'S PATENT AND TRADE MARK ATTORNEYS; SPRUSON AND FERGUSON; JAMES IAN RAISBECK LLINAS; DAVIES CHRISTOPHER ROBERT; JOHNSTON JASON W 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

**9) Family number: 59343950 (US2016263271A)**

© PatBase

**Title:** ABSORBENT ARTICLE CONTAINING A SOFT AND DURABLE BACKSHEET

**Abstract:** An absorbent article having an outwardly body-facing surface and an outwardly garment-facing surface is provided. The absorbent article contains a topsheet, backsheet, and an absorbent core positioned between the topsheet and the backsheet. The backsheet contains a nonwoven facing laminated to a film. The nonwoven facing contains a first nonwoven web containing a plurality of fibers formed from a first polyolefin composition and a second nonwoven web containing a plurality of fibers formed from a second polyolefin composition. The first polyolefin composition contains at least one ethylene polymer and the second polyolefin composition contains at least one rigid propylene polymer and at least one ductile propylene polymer. The second nonwoven web defines the garment-facing surface of the article.

## **Classifications:**

**International (IPC 8-9):** A61F13/49 A61F13/514 A61F13/53

A61F13/535 A61L15/22 A61L15/24 A61L15/26 A61L15/34

A61L15/60 (Advanced/Invention)

**CPC:** A61L15/225 A61L15/60 A61L15/26 A61F13/535

A61F2013/530233 A61F13/51401 A61F13/51478 A61F2013/51452

A61L15/24 A61L15/34

**US:** 1/1 604/370

