

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
23 December 2009 (23.12.2009)

PCT

(10) International Publication Number
WO 2009/155265 A3

(51) International Patent Classification:
A61L 15/22 (2006.01) *A61L 15/60* (2006.01)

(21) International Application Number:
PCT/US2009/047459

(22) International Filing Date:
16 June 2009 (16.06.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/074,258 20 June 2008 (20.06.2008) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) Date of publication of the international search report:
25 November 2010

(54) Title: ABSORBENT STRUCTURES INCLUDING COATED ABSORBENT MATERIAL

(57) Abstract: An absorbent layer containing water-absorbing polymeric particles that are surface-treated and that are immobilized by a matrix, formed from a thermoplastic adhesive component, including a thermoplastic polymers and a specific plasticizer, and being free of low weight average molecular weight (e.g. below 1000, or below 2000 or even below 3000 g/mole) tackifiers and plasticizers. The absorbent articles may for example be adult incontinence articles, infant (e.g. baby, toddler) diapers, including training pants, and feminine hygiene articles, such as sanitary napkins.



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INTERNATIONAL SEARCH REPORT

International application No

PCT/US2009/047459

A. CLASSIFICATION OF SUBJECT MATTER

INV. A61L15/22 A61L15/60

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A61L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2006/083583 A2 (PROCTER & GAMBLE [US]; SCHMIDT MATTIAS [DE]; MEYER AXEL [DE]; FOSSUM R) 10 August 2006 (2006-08-10) page 7, paragraph 6 - page 9, paragraph 2 page 10, paragraph 3 page 12, paragraph 3 - page 18, paragraph 6; claims; examples	1-3,6,8-12,15
X	US 2007/066754 A1 (LOEKER FRANK [DE] ET AL) 22 March 2007 (2007-03-22) paragraphs [0012], [0015], [0019] - [0021], [0029], [0041] paragraphs [0048] - [0056], [0067], [0076], [0077], [0079] - [0083] paragraphs [0112], [0116], [0118], [0129] - [0131], [0138]; claims ----- -/--	1,4-7,10-12,15



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

Date of the actual completion of the international search

18 June 2010

Date of mailing of the international search report

12/10/2010

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INTERNATIONAL SEARCH REPORT

International application No

PCT/US2009/047459

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2005/033256 A1 (SCHMIDT MATTIAS [DE] ET AL) 10 February 2005 (2005-02-10) the whole document -----	1-12, 15
A	WO 99/57201 A1 (FULLER H B LICENSING FINANC [US]; AHMED SHARF U [US]; EMIRU ANDUALEM W) 11 November 1999 (1999-11-11) the whole document -----	1-12, 15

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/047459

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-12, 15

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-12, 15

An absorbent article comprising an absorbent layer comprising polymeric particles having a modified surfaced (modified by a coating or a coating agent) and a thermoplastic adhesive component. The layer being obtainable by : contacting a thermoplastic component having a specific viscosity and molecular weight and a plasticizer with the surface modified polymeric particles.

2. claims: 13, 14

A method for the determination of the impact of the presence of thermoplastic adhesive component on the absorption of the water-absorbing polymer article.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2009/047459

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2006083583 A2	10-08-2006	CA 2596864 A1 CN 101115513 A EP 1843799 A2 JP 2008536531 T	10-08-2006 30-01-2008 17-10-2007 11-09-2008
US 2007066754 A1	22-03-2007	BR PI0412852 A CN 1845763 A DE 10334286 A1 EP 1648603 A2 WO 2005011860 A2 JP 2006528544 T KR 20060059983 A	03-10-2006 11-10-2006 03-03-2005 26-04-2006 10-02-2005 21-12-2006 02-06-2006
US 2005033256 A1	10-02-2005	NONE	
WO 9957201 A1	11-11-1999	AU 3891899 A BR 9910261 A CN 1308654 A EP 1084194 A1 JP 2002526560 T US 6534572 B1 US 6458877 B1	23-11-1999 02-01-2001 15-08-2001 21-03-2001 20-08-2002 18-03-2003 01-10-2002