

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
25 October 2007 (25.10.2007)

PCT

(10) International Publication Number
WO 2007/120561 A3

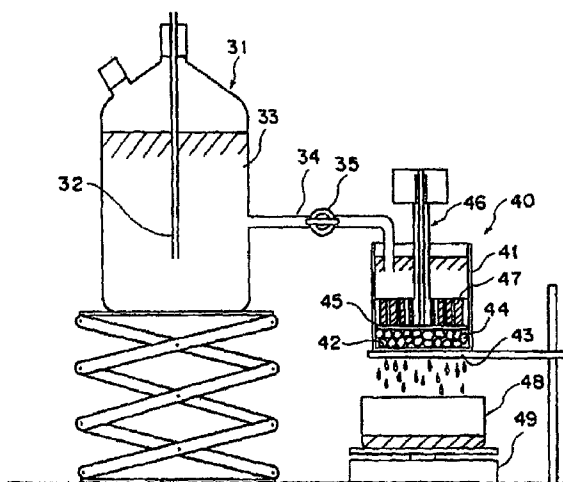
- (51) **International Patent Classification:**
C08J 3/28 (2006.01)
- (21) **International Application Number:**
PCT/US2007/008475
- (22) **International Filing Date:** 4 April 2007 (04.04.2007)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
2006-108083 10 April 2006 (10.04.2006) JP
2006-157582 6 June 2006 (06.06.2006) JP
- (71) **Applicant (for all designated States except US):** **THE PROCTER & GAMBLE COMPANY** [US/US]; One Procter & Gamble Plaza, Cincinnati, OH 45202 (US).

- 992-1, Aza Nishioki, Okihama, Aboshi-ku, Himeji-shi, Hyogo 671-1282 (JP).
- (74) **Common Representative:** Eileen L. Hughett; The Procter & Gamble Company, Winton Hill Business Center, 6110 Center Hill Road, Cincinnati, OH 45224 (US).
- (81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, 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, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, 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, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, 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

[Continued on next page]

(54) **Title:** AN ABSORBENT MEMBER COMPRISING A MODIFIED WATER ABSORBENT RESIN



(57) **Abstract:** This invention is to provide an absorbent member and a method for making such an absorbent member. The absorbent member comprises modified water absorbent having good production efficiency, good absorbency against pressure, good absorption speed, gel strength, good liquid permeability, and the like. The modified water absorbent resin is made by a method, which comprises (i) a mixing step comprising mixing a water absorbent resin, water, and a water-soluble radical polymerization initiator without addition of an ethylenically unsaturated monomer, to obtain a water absorbent resin composition, and (ii) an irradiating step comprising irradiating said water absorbent resin composition obtained in the mixing step with active energy rays, wherein the surface water content of said water absorbent resin in said water absorbent resin composition at least at any point of time in the irradiating step (ii) is controlled to a level of not lower than 3.0% by weight based on 100% by weight of the water absorbent resin. Preferably, the amount of water mixed in said step (i) exceeds 20 parts by weight and is not more than 100 parts by weight based on 100 parts by weight of the water absorbent resin.

WO 2007/120561 A3



(88) Date of publication of the international search report:

3 January 2008

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/008475

A. CLASSIFICATION OF SUBJECT MATTER
INV. C08J3/28

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)
C08J

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, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 2006/063229 A (PROCTER & GAMBLE [US]; MATSUMOTO MAKOTO [JP]; MITSUKAMI YOSHIRO [JP];) 15 June 2006 (2006-06-15) claims 1,5-10,12-16; examples 1-20	1-4, 6, 8-18
P, A	claim 7	5, 7
X	----- EP 0 248 437 A (HAYASHIKANE SHIPBUILDING & ENG [JP]) 9 December 1987 (1987-12-09) examples 1-4 column 6, lines 25-45 -----	1-4

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
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

28 September 2007

Date of mailing of the international search report

08/10/2007

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Devriese, Karel

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/008475

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 2006063229	A	15-06-2006	AU	2005313954 A1	15-06-2006
			CA	2591245 A1	15-06-2006
			EP	1819370 A2	22-08-2007
			US	2006128827 A1	15-06-2006

EP 0248437	A	09-12-1987	US	4783510 A	08-11-1988
