

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
6 October 2005 (06.10.2005)

PCT

(10) International Publication Number
WO 2005/092955 A1

(51) International Patent Classification⁷: **C08J 3/12**, 3/24,
C08L 101/14, A61L 15/60

(74) Agents: **HATTA, Mikio** et al.; Dia Palace Nibancho, 11-9,
Nibancho, Chiyoda-ku, Tokyo 1020084 (JP).

(21) International Application Number:
PCT/JP2005/006551

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, 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, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 29 March 2005 (29.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2004-096083 29 March 2004 (29.03.2004) JP
2004-211856 20 July 2004 (20.07.2004) JP

(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, MC, 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).

(71) Applicant (*for all designated States except US*): **NIPPON SHOKUBAI CO., LTD.** [JP/JP]; 1-1, Koraibashi 4-chome, Chuo-ku, Osaka-shi, Osaka, 5410043 (JP).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **ISHIZAKI, Kunihiko** [JP/JP]; A6-101, 2-7, Aoyamada, Suita-shi, Osaka 5650875 (JP). **KITANO, Takahiro** [JP/JP]; 931-11, Hamada, Aboshi-ku, Himeji-shi, Hyogo 6711242 (JP). **ADACHI, Yoshifumi** [JP/JP]; 931-11, Hamada, Aboshi-ku, Himeji-shi, Hyogo 6711242 (JP). **UEDA, Hiroko** [JP/JP]; 31-19, Hiramatsu, Otsu-ku, Himeji-shi, Hyogo 6711145 (JP). **WADA, Katsuyuki** [JP/JP]; 4-10-5, Taderahigashi, Himeji-shi, Hyogo 6700081 (JP).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

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.

(54) Title: PARTICULATE WATER ABSORBING AGENT WITH IRREGULARLY PULVERIZED SHAPE

(57) Abstract: The present invention provides a particulate water absorbing agent for a thin type absorbing substrate suitable for actual use. A particulate water absorbing agent having irregularly pulverized shape, characterized by comprising, a surface crosslinked water-absorbing resin obtained by crosslinking polymerization of an unsaturated monomer with an acid group and/or salts thereof, which absorbing agent contains agglomerated particles therein and further satisfies (i) centrifuge retention capacity (CRC) in a physiological saline solution of not lower than 32 g/g, (ii) mass median particle size (D50) of 200 to 400 µm, and (iii) particles smaller than 600 µm and not smaller than 150 µm of 95 to 100% by weight. By using the particulate water absorbing agent, such absorbing articles can be obtained as have few rugged surface after water absorption, excellent liquid permeation property.



WO 2005/092955 A1