

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
18 May 2006 (18.05.2006)

PCT

(10) International Publication Number
WO 2006/052748 A3

- (51) International Patent Classification:
B01D 53/26 (2006.01) **B65D 81/26** (2006.01)
- (21) International Application Number:
PCT/US2005/039999
- (22) International Filing Date:
3 November 2005 (03.11.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
10/984,080 9 November 2004 (09.11.2004) US
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(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, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, 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.

(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, 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

(88) Date of publication of the international search report:
16 April 2009

(54) Title: HUMIDITY CONTROL DEVICE

(57) **Abstract:** A device for controlling relative humidity in an environment with a solidified humectant composition. The solidified humectant composition is made from a humectant salt, water, and a carrier. The solidified humectant may be formed into a tablet with the aid of a binder, or it may be contained within a thermoformed felt material, a sachet, or a water permeable canister. In a preferred embodiment, the sachet is made of a micro-perforated polyester/paper/polyethylene material. Preferred humectant salts include CaCl_2 , K_2CO_3 , LiCl_2 , NaCl , K_2SO_4 , and combinations thereof. A preferred embodiment of the present invention includes the use of one or more of: an antimicrobial agent, activated carbon, a volatile organic, a moisture adsorber and an oxygen absorber, in combination with the solidified humectant salt.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/39999

A. CLASSIFICATION OF SUBJECT MATTER

IPC: B01D 53/26(2006.01);B65D 81/26(2006.01)

USPC: 96/118,119;252/188.28,194;206/204

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)

U.S. : 96/108, 118, 119, 120, 147; 252/188.28, 194; 206/204; 95/91

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 practicable, search terms used)

Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 6,767,521 B1 (VOGT et al) 27 July 2004 (27.07.2004), figures, col. 3, line 55 to col. 4, line 19, col. 4, line 47 to col. 6, line 17, col. 7, lines 43-65	1, 6, 8, 9, 12, 14, 15, 17, 18, 20, 21 ----- 7, 10, 19, 22
X --- Y	US 3,549,549 A (HENDERSON) 22 December 1970 (22.12.1970), col. 2, lines 5-66	1-3, 6 ----- 4, 5, 7, 10-14, 18, 19, 22
Y	US 6,540,937 B1 (PAYNE et al) 01 April 2003 (01.04.2003), figures, col. 3, lines 17-51	12-14, 18
Y	EP 0387604 A1 (MERCK PATENT GESELLSCHAFT MIT BESCHRANKTER HAFTUNG) 28 February 1990 (28.02.1990), col. 1, line 49 to col. 2, line 11	4, 5, 11
Y	US 6,796,423 B2 (MILLER) 28 September 2004 (28.09.2004), col. 2, lines 18-22, col. 4, lines 8-15	7, 10, 19, 22

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

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Date of the actual completion of the international search

13 May 2008 (13.05.2008)

Date of mailing of the international search report

08 JUL 2008

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US05/39999

Continuation of B. FIELDS SEARCHED Item 3:
DERWENT
search terms: desiccant, deliquescent, hygroscopic, humectant