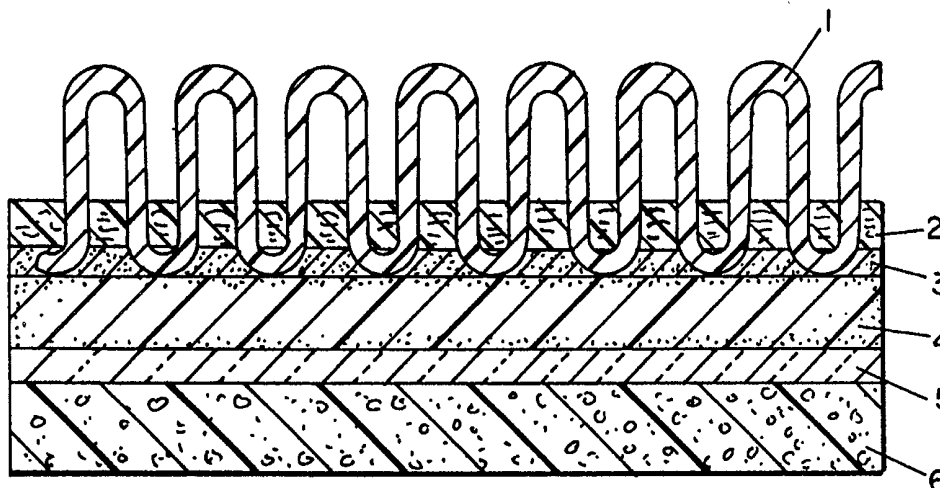




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : D06N 7/00, 3/00	A3	(11) International Publication Number: WO 99/35327 (43) International Publication Date: 15 July 1999 (15.07.99)
<p>(21) International Application Number: PCT/US99/00605</p> <p>(22) International Filing Date: 12 January 1999 (12.01.99)</p> <p>(30) Priority Data: 60/071,110 12 January 1998 (12.01.98) US</p> <p>(71) Applicant: MANNINGTON MILLS, INC. [US/US]; Mannington Mills Road, P.O. Box 30, Salem, NJ 08079 (US).</p> <p>(72) Inventors: BURNS, Alonzo, M., Jr.; P.O. Box 177, Maurice-town, NJ 08329 (US). CHEN, Hao, A.; 40 Blue Stone Road, Chadds Ford, PA 19317 (US). ZEREBECKI, Nicholas; 202 Teal Road, Mullica Hill, NJ 08062 (US). PATTERSON, Charles; 174 Lakeview Circle, S.E., Adairsville, GA 30103 (US).</p> <p>(74) Agent: KILYK, Luke, A.; Kilyk & Bowersox P.L.L.C., 3603-E Chain Bridge Road, Fairfax, VA 22030 (US).</p>	<p>(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p> <p>Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i></p> <p>(88) Date of publication of the international search report: 4 November 1999 (04.11.99)</p>	

(54) Title: A SURFACE COVERING BACKING CONTAINING POLYMERIC MICROSPHERES AND PROCESSES OF MAKING THE SAME



(57) Abstract

A secondary backing for surface coverings is disclosed which comprises at least one thermoplastic material optionally having polymeric microspheres dispersed therein. A textile substrate comprising a primary backing with textile fibers extending upwardly from the backing and forming a surface and the above-described secondary backing attached thereto is also described. Methods of making the textile substrate and the secondary backing which can be foam or hardback are also described. Also described is a resilient surface covering, such as vinyl flooring, using the secondary backing of the present invention in one or more layers.

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INTERNATIONAL SEARCH REPORT

International Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 2 160 422 A (DOW CHEMICAL CO) 29 June 1973 (1973-06-29)	1-3,5, 8-11,17, 23-25,31
A	page 2, line 23 - line 38; claims 1,5; examples page 3, line 34 - line 40 ---	35,63
X	DATABASE WPI Section Ch, Week 8520 Derwent Publications Ltd., London, GB; Class A84, AN 85-119240 XP002103129 & JP 60 059183 A (YUKA BADISCHE KK), 5 April 1985 (1985-04-05)	1-3,5, 8-11,17, 23-25,31
A	abstract ---	35,63
X	EP 0 560 325 A (MITSUBISHI YUKA BADISCHE) 15 September 1993 (1993-09-15)	1,2,4,5, 7-11,17, 23-26, 31,35, 36,46,63
Y	page 2, line 50 - line 58; claims 1,6,8 page 3, line 33 -page 4, line 45 page 6, line 26 - line 28 ---	27,28, 37,38
A	US 4 689 256 A (SLOSBERG DAVID K ET AL) 25 August 1987 (1987-08-25) column 5, line 64 -column 7, paragraph 1; figures ---	1,2,4-6, 8-11, 23-25, 35,46
	FR 2 496 739 A (BOUSSAC SAINT FRERES BSF) 25 June 1982 (1982-06-25)	page 2, line 22 -page 3, line 8; claims; figures -----

INTERNATIONAL SEARCH REPORT

International application No.

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 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 II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

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

see Further Information PCT/ISA/210

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 fee, this Authority did not invite payment of any additional fee.
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, 15-17, 19, 20, 23-31, 35-41, 44-46, 63

Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International Application No. PCT/US 99/00605

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

1. Claims: 1-12,15-17,19,20,23-31,35-41,44-46,63

surface covering comprising a layer containing a thermoplastic material and polymeric microspheres dispersed therein, carpet comprising it and method for making it..

2. Claims: 13,14,18,21,22,32-34,42,43,47,48,58-62

surface covering comprising a layer containing a thermoplastic material and an activated blowing agent.

3. Claims: 49-57

surface covering comprising a support layer and a layer on top of it containing a thermoplastic material and polymeric microspheres dispersed therein.

INTERNATIONAL SEARCH REPORT
Information on patent family members

Intern: al Application No
PCT/US 99/00605

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0270330 A	08-06-1988	JP 1895626 C JP 6022916 B JP 63309430 A JP 1604124 C JP 2028458 B JP 63139732 A DE 3780419 A US 4836871 A	26-12-1994 30-03-1994 16-12-1988 22-04-1991 25-06-1990 11-06-1988 20-08-1992 06-06-1989
FR 2160422 A	29-06-1973	AT 320582 B AU 461772 B AU 4869572 A BE 791455 A CA 968239 A DE 2256546 A GB 1404849 A IT 973564 B JP 48059633 A NL 7215234 A US 3819463 A	25-02-1975 05-06-1975 09-05-1974 16-05-1973 27-05-1975 30-05-1973 03-09-1975 10-06-1974 21-08-1973 21-05-1973 25-06-1974
JP 60059183 A	05-04-1985	JP 1014351 B JP 1527523 C	10-03-1989 30-10-1989
EP 0560325 A	15-09-1993	JP 2520817 B JP 5254081 A JP 2520818 B JP 5254082 A JP 2665710 B JP 6154070 A JP 2796914 B JP 6169837 A DE 69323103 D DE 69323103 T SG 48988 A US 5332457 A	31-07-1996 05-10-1993 31-07-1996 05-10-1993 22-10-1997 03-06-1994 10-09-1998 21-06-1994 04-03-1999 17-06-1999 18-05-1998 26-07-1994
US 4689256 A	25-08-1987	US RE34951 E	23-05-1995
FR 2496739 A	25-06-1982	NONE	