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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)

(21) International Application Number: PCT/US99/00605

(22) International Filing Date: 12 January 1999 (12.01.99)

(30) Priority Data: 60/071,110 12 January 1998 (12.01.98) US

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(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).

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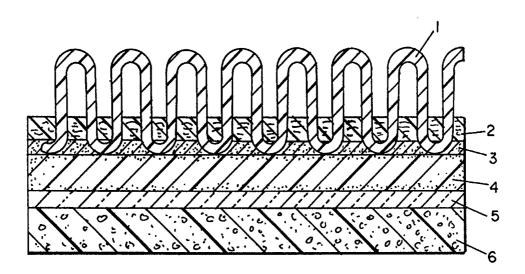
With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(88) Date of publication of the international search report: 4 November 1999 (04.11.99)

4 November 1999 (04.11.99)

(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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a. classification of subject matter IPC 6 D06N7/00 D06N D06N3/00 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) IPC 6 D06N 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) C. DOCUMENTS CONSIDERED TO BE RELEVANT Relevant to claim No. Citation of document, with indication, where appropriate, of the relevant passages 1,3,5, EP 0 270 330 A (MITSUBISHI YUKA BADISCHE) Х 7-12,19, 8 June 1988 (1988-06-08) 20, 23-26, 29-31, 35,36, 45,63 page 6, line 12 -page 7, line 8; claims; examples page 7, line 50 - line 56 27,28, page 8, line 39 - line 41 Υ 37,38 17,41 page 9, line 1 - line 25 -/--Patent family members are listed in annex. Further documents are listed in the continuation of box C. ° Special categories of cited documents: "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 "A" document defining the general state of the art which is not considered to be of particular relevance earlier document but published on or after the international "X" document of particular relevance; the claimed invention filing date cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another "Y" document of particular relevance; the claimed invention citation or other special reason (as specified) cannot be considered to involve an inventive step when the document is combined with one or more other such docu-"O" document referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled other means in the art. "P" document published prior to the international filing date but "&" document member of the same patent family later than the priority date claimed Date of mailing of the international search report Date of the actual completion of the international search 23. 09. 1999 19 May 1999 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, PAMIES OLLE S. Fax: (+31-70) 340-3016

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C.(Continu	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	Relevant to claim No.
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Х	FR 2 160 422 A (DOW CHEMICAL CO) 29 June 1973 (1973-06-29)	1-3,5, 8-11,17, 23-25,31
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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),	1-3,5, 8-11,17, 23-25,31
Α	5 April 1985 (1985-04-05) abstract	35,63
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	page 2, line 50 - line 58; claims 1,6,8 page 3, line 33 -page 4, line 45 page 6, line 26 - line 28	
Υ	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	27,28, 37,38
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	page 2, line 22 -page 3, line 8; claims; figures	

Inte. .ational 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:
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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
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. X 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.

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.

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