



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 473 396 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
09.02.2005 Bulletin 2005/06

(51) Int Cl.7: **D04H 13/00**

(43) Date of publication A2:
03.11.2004 Bulletin 2004/45

(21) Application number: **04425285.6**

(22) Date of filing: **23.04.2004**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IT LI LU MC NL PL PT RO SE SI SK TR**
Designated Extension States:
AL HR LT LV MK

(72) Inventor: **Diddi, Gabriele**
59100 Prato (IT)

(30) Priority: **30.04.2003 IT FI20030122**

(74) Representative: **Bardini, Marco Luigi et al**
c/o Società Italiana Brevetti S.p.A.
Corso dei Tintori, 25
50122 Firenze (IT)

(71) Applicant: **Diddi, Gabriele**
59100 Prato (IT)

(54) **Composite synthetic fibre material for footwear insoles and production process therefor**

(57) A method for the manufacture of a composite synthetic fibre material in the form of sheets or strip intended for the use in the footwear field, especially for the production of footwear insoles. The method comprises the steps of: homogenization of the fibres; carding of the fibres to obtain a fibre structure arranged in several layers; multi-phase needle punching of the layered fibre structure to obtain a felt; characterized in that said felt is subjected to a controlled surface heat treat-

ment suitable for causing the fluff present thereon to melt, and to form partially molten clots without affecting the whole mass of said felt. The felt treated in this manner is then subjected to a finishing treatment in a bath containing an aqueous suspension of a synthetic rubber, the resulting product being subjected to drying in an hot air furnace.

EP 1 473 396 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 04 42 5285

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	GB 986 686 A (FMC CORP) 24 March 1965 (1965-03-24) * page 2, lines 11-128 *	1,5,6,8, 11	D04H13/00
A	US 3 284 872 A (CLOSSON JR ADDISON W) 15 November 1966 (1966-11-15) * the whole document *	1,5-8, 10,11	
A	US 3 661 674 A (HIGGS MAURICE WILLIAM ET AL) 9 May 1972 (1972-05-09) * the whole document *	1,5,6,8, 11	
A	WO 99/22060 A (TEXON MATERIALES S L ; TEXON UK LTD (GB); JOHNSON SUSAN GWYNNETH (GB)) 6 May 1999 (1999-05-06) * claims 1-17 *	1,7,8	
A	WO 01/06885 A (TEXON MATERIALES S L ; GRANTHAM JOHN WILLIAM (GB); WELLAND EDWARD JOHN) 1 February 2001 (2001-02-01) * the whole document *	1,3,5,6, 8-11	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			D04H
Place of search		Date of completion of the search	Examiner
The Hague		20 December 2004	V Beurden-Hopkins, S
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p> <p>& : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03.02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 04 42 5285

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

20-12-2004

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 986686	A	24-03-1965	CH 409847 A FR 1325137 A NL 276259 A	15-12-1965 26-04-1963

US 3284872	A	15-11-1966	NONE	

US 3661674	A	09-05-1972	DE 1619223 A1 FR 1522613 A GB 1176161 A NL 6704881 A	22-04-1971 26-04-1968 01-01-1970 09-10-1967

WO 9922060	A	06-05-1999	AU 9752298 A BR 9812975 A CN 1278877 T DE 69819028 D1 DE 69819028 T2 EP 1025301 A1 ES 2205562 T3 WO 9922060 A1	17-05-1999 08-08-2000 03-01-2001 20-11-2003 08-07-2004 09-08-2000 01-05-2004 06-05-1999

WO 0106885	A	01-02-2001	AU 5999900 A WO 0106885 A1	13-02-2001 01-02-2001

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82