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(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.

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EUROPEAN SEARCH REPORT

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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	
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention	
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		document	

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ON EUROPEAN PATENT APPLICATION NO.**

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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
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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	15-12-1965
			FR 1325137 A	26-04-1963
			NL 276259 A	
US 3284872	A	15-11-1966	NONE	
US 3661674	A	09-05-1972	DE 1619223 A1	22-04-1971
			FR 1522613 A	26-04-1968
			GB 1176161 A	01-01-1970
			NL 6704881 A	09-10-1967
WO 9922060	A	06-05-1999	AU 9752298 A	17-05-1999
			BR 9812975 A	08-08-2000
			CN 1278877 T	03-01-2001
			DE 69819028 D1	20-11-2003
			DE 69819028 T2	08-07-2004
			EP 1025301 A1	09-08-2000
			ES 2205562 T3	01-05-2004
			WO 9922060 A1	06-05-1999
WO 0106885	A	01-02-2001	AU 5999900 A	13-02-2001
			WO 0106885 A1	01-02-2001

EPO FORM P0459

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