

Title (en)  
Nonwoven fabric made of thermobonded filaments or fibres

Title (de)  
Nichtgewebtes Vlies aus thermogebundenen Fäden oder Fasern

Title (fr)  
Nappe nontissée formée à partir de filaments ou de fibres thermoliés

Publication  
**EP 1048771 A1 20001102 (DE)**

Application  
**EP 00103508 A 20000218**

Priority  
FR 9902601 A 19990301

Abstract (en)  
[origin: FR2790489A1] The filaments or fibers are unitary, comprising 5-50 wt% of a polymer binder. The cross section exhibits two or more sectors or zones of binder and two or more zones of polymer(s) which will form structural component(s) of the cloth. Following assembly, the cloth is subjected to thermal bonding. Preferred features: The binder comprises 10-30 wt%. It is located predominantly (but not exclusively) in peripheral zones of the composite filaments or fibers. It is visible in at least two separate surface zones. The binder content at the external surface, exceeds the weight content in the composition of the filaments or fibers. Binder and structural polymers are incompatible (do not blend in depth). Following extrusion, the unitary filaments or fibers have a composite, multi-segment structure. They are separated, resulting in two distinct zones of polymer binder, and/or two sectors or distinct zones of polymer(s) to form the filamentary structures of the cloth. The filaments or fibers exhibit an external cylindrical structure, and an internal structure comprising: lamellae, quarter segments with or without a central orifice, satellite structures with or without protuberances, and complementary indentations. External structure of the filaments or fibers is multi-lobed, sectors or zones of binder polymer being preferentially situated at the extremities of these lobes.

Abstract (de)  
Diese Erfindung hat ein nichtgewebtes Vlies zum Gegenstand, das mindestens zum Teil aus Endlosfäden oder zusammengesetzten Fasern hergestellt wird, die aus mindestens zwei Komponenten aus thermoplastischen polymeren Materialien bestehen. Vlies, das dadurch gekennzeichnet ist, dass es mindestens teilweise aus einheitlichen Fäden oder Fasern besteht, die zu 5 % bis 50 % ihres Gewichts ein Polymer umfassen, das dazu bestimmt ist, das Bindemittel darzustellen, und in ihrem Querschnitt mindestens zwei unterschiedliche Polymerbereiche oder -zonen aufweisen, die das Bindemittel darstellen, und/oder mindestens zwei unterschiedliche Polymerbereiche oder -zonen aufweisen, die die strukturelle(n) Komponente(n) des resultierenden Vlieses darstellen, wobei dieses Vlies nach der Herstellung einer Behandlung durch Thermobindung unterzogen wird. <IMAGE>

IPC 1-7  
**D04H 1/42**; **D04H 1/48**; **D04H 1/54**; **D04H 3/03**; **D04H 3/14**; **D04H 3/12**; **D01D 5/30**; **D01D 5/34**; **D01F 8/06**; **D01F 8/14**; **D01D 5/253**; **D01D 5/36**

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Citation (search report)  
• [X] FR 2749860 A1 19971219 - FREUDENBERG SPUNWEB SA [FR]  
• [X] US 5707735 A 19980113 - MIDKIFF DAVID GRANT [US], et al  
• [X] EP 0731198 A2 19960911 - UNITIKA LTD [JP]  
• [X] EP 0854213 A1 19980722 - CHISSO CORP [JP]  
• [X] JP H06128859 A 19940510 - UNITIKA LTD  
• [A] FR 2450292 A1 19800926 - AKZO NV [NL]  
• [A] US 5498468 A 19960312 - BLANEY CAROL A [US]  
• [X] PATENT ABSTRACTS OF JAPAN vol. 1999, no. 01 29 January 1999 (1999-01-29) & JP H10280262 A 19981020 - UNITIKA LTD  
• [X] PATENT ABSTRACTS OF JAPAN vol. 013, no. 124 (C - 580) 27 March 1989 (1989-03-27) & JP S63295712 A 19881202 - MITSUBISHI RAYON CO  
• [A] PATENT ABSTRACTS OF JAPAN vol. 1997, no. 02 28 February 1997 (1997-02-28)

Cited by  
DE102007040795A1; DE102007040795B4; JP2014073443A; US8382926B2; WO2009030300A1

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