

Title (en)  
NONWOVEN FABRIC, FELT AND MANUFACTURING METHOD THEREOF

Title (de)  
VLIESSTOFF, FILZ UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)  
TISSU NON TISSÉ, FEUTRE ET PROCÉDÉ POUR LEUR FABRICATION

Publication  
**EP 2287374 A1 20110223 (EN)**

Application  
**EP 09762305 A 20090225**

Priority  
• JP 2009054008 W 20090225  
• JP 2008154070 A 20080612

Abstract (en)  
A nonwoven fabric which contains pitch-based carbon fibers having a high elongation and a high elastic modulus which are not attained in the prior art and is obtained by improving the tensile elongation which was defect of carbon fibers derived from mesophase pitch, a felt obtained from the nonwoven fabric, and production processes therefor. The nonwoven fabric contains pitch-based carbon fibers, wherein the pitch-based carbon fibers have (i) an average fiber diameter (D1) measured by an optical microscope of more than 2  $\mu\text{m}$  and 20  $\mu\text{m}$  or less, (ii) a percentage of the degree of fiber diameter distribution (S1) to average fiber diameter (D1) measured by an optical microscope of 3 to 20 %, (iii) a tensile elastic modulus of 80 to 300 GPa and (iv) a tensile elongation of 1.4 to 2.5 %.

IPC 8 full level  
**D01F 9/145** (2006.01); **D04H 1/42** (2012.01); **D04H 1/4242** (2012.01); **D04H 1/488** (2012.01)

CPC (source: EP KR)  
**D01F 9/145** (2013.01 - EP KR); **D04H 1/4242** (2013.01 - EP KR); **D04H 1/4382** (2013.01 - KR); **D04H 1/46** (2013.01 - KR); **D04H 1/488** (2013.01 - EP KR); **D04H 1/724** (2013.01 - KR)

Cited by  
CN103015032A; US9617685B2; US9605126B2

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AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA RS

DOCDB simple family (publication)  
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**EP 09762305 A 20090225**; CN 200980122045 A 20090225; JP 2009054008 W 20090225; JP 2010516779 A 20090225; KR 20107027129 A 20090225; TW 98106499 A 20090227