

Title (en)  
METHOD FOR PRODUCING FINE MONOFILAMENTS CONSISTING OF POLYPROPYLENE, FINE MONOFILAMENTS CONSISTING OF POLYPROPYLENE AND THE USE THEREOF

Title (de)  
VERFAHREN ZUR HERSTELLUNG VON FEINEN MONOFILAMENTEN AUS POLYPROPYLEN, FEINE MONOFILAMENTE AUS POLYPROPYLEN SOWIE DEREN VERWENDUNG

Title (fr)  
PROCEDE POUR PRODUIRE DES MONOFILAMENTS FINS EN POLYPROPYLENE, MONOFILAMENTS FINS EN POLYPROPYLENE ET LEUR UTILISATION

Publication  
**EP 1392897 B1 20060510 (DE)**

Application  
**EP 02704535 A 20020322**

Priority  
• CH 0200171 W 20020322  
• CH 7472001 A 20010424

Abstract (en)  
[origin: WO02086207A1] The invention relates to a method for producing fine monofilaments with an improved abrasion resistance from a polypropylene with a melt fusion index (MFI) 230 DEG C/12.16 kg of 2-16g/10 min to a titer of 5-20 dtex (0.027 mm-0.053mm). According to said method, a compound of 80 to 99.9 wt. % granulate and 20 to 0.1 wt % of an additive is added to the extruder, the melt is spun at a speed of at least 1200 m/min, cooled in an air bath at room temperature, stretched at a temperature of between 110 and 150 DEG C to a titer of 5-20 dtex and wound. The monofilaments consisting of a polypropylene with a melt fusion index (MFI) 230 DEG C/12.16 kg of 2-16g/10 min, improved abrasion resistance and a titer of 5-20 dtex (0.027 mm-0.053mm) have an abrasion resistance  $\leq 2$ . The monofilaments have a mechanical constant of at least 295 cN/tex and specific tear properties of more than 61.5 cN . cm/dtex with a strength of at least 48 cN/tex and a maximum tensile force extension of less than 45 %. The inventive fine monofilaments are suitable for producing screen textiles without abrasion for filtration and serigraphy.

IPC 8 full level  
**D01F 6/46** (2006.01); **D01F 1/10** (2006.01); **D01F 6/06** (2006.01)

CPC (source: EP US)  
**D01F 1/10** (2013.01 - EP US); **D01F 6/06** (2013.01 - EP US); **D01F 6/46** (2013.01 - EP US); **Y10T 428/2913** (2015.01 - EP US); **Y10T 428/2927** (2015.01 - EP US); **Y10T 428/2967** (2015.01 - EP US)

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
**WO 02086207 A1 20021031**; AT E325910 T1 20060615; CN 100355952 C 20071219; CN 1505704 A 20040616; DE 50206749 D1 20060614; EP 1392897 A1 20040303; EP 1392897 B1 20060510; ES 2259369 T3 20061001; JP 2004524455 A 20040812; PT 1392897 E 20060929; TW 579394 B 20040311; US 2004142169 A1 20040722; US 2004265584 A1 20041230; US 2005129940 A1 20050616; US 6805955 B2 20041019; US 7214426 B2 20070508

DOCDB simple family (application)  
**CH 0200171 W 20020322**; AT 02704535 T 20020322; CN 02808855 A 20020322; DE 50206749 T 20020322; EP 02704535 A 20020322; ES 02704535 T 20020322; JP 2002583717 A 20020322; PT 02704535 T 20020322; TW 91102349 A 20020208; US 47561104 A 20040315; US 89511904 A 20040721; US 96119904 A 20041012