

Title (en)  
HYDROENTANGLEMENT OF CONTINUOUS POLYMER FILAMENTS

Title (de)  
WASSERSTRAHLVERWIRBELUNG ENDLOSER POLYMERFILAMENTE

Title (fr)  
HYDROENTREMELAGE DE FILAMENTS CONTINUS DE POLYMERES

Publication  
**EP 1360357 B2 20100609 (EN)**

Application  
**EP 01273236 A 20010112**

Priority  
US 0101277 W 20010112

Abstract (en)  
[origin: WO02055778A1] A nonwoven fabric (8) comprises continuous polymer filaments (2) of 0.5 to 3 denier that have been hydroentangled in a complex matrix for interconnecting filament loops, and that is otherwise substantially free of knotting, or of otherwise wrapping about one another. A process for making a nonwoven fabric comprises continuously extruding polymer filaments of 0.5 to 3 denier onto a moving support (14), pre-entangling the filaments with water jets (12), and entangling the filaments with a second set of water jets (16) on a three-dimensional image transfer device.

IPC 8 full level  
**D04H 1/56** (2006.01); **D04H 3/16** (2006.01); **D04H 18/04** (2012.01)

CPC (source: EP)  
**D04H 18/04** (2013.01)

Citation (opposition)  
Opponent :

- US 3485706 A 19691223 - EVANS FRANKLIN JAMES
- US 5369858 A 19941206 - GILMORE THOMAS [US], et al
- US 3493462 A 19700203 - BUNTING WILLIAM WALLAR JR, et al
- US 3560326 A 19710202 - BUNTING WILLIAM WALLAR JR, et al
- WO 0018996 A1 20000406 - KIMBERLY CLARK CO [US]

Cited by  
DE102008029057A1

Designated contracting state (EPC)  
NL

DOCDB simple family (publication)  
**WO 02055778 A1 20020718**; AU 2001229480 B2 20060824; CA 2434432 A1 20020718; CA 2434432 C 20080729; EP 1360357 A1 20031112; EP 1360357 A4 20040519; EP 1360357 B1 20070606; EP 1360357 B2 20100609; IL 156862 A0 20040208; IL 156862 A 20090922; JP 2004518029 A 20040617

DOCDB simple family (application)  
**US 0101277 W 20010112**; AU 2001229480 A 20010112; CA 2434432 A 20010112; EP 01273236 A 20010112; IL 15686201 A 20010112; IL 15686203 A 20030710; JP 2002556418 A 20010112