

Title (en)

Wiping sheet of raised non-woven fabric and production thereof

Title (de)

Wischtuch aus Vliesstoff mit Reliefmustern und dessen Herstellung

Title (fr)

Torchon d'essuillage en tissu non-tissé comportant des motifs en relief et sa fabrication

Publication

EP 0959164 A1 19991124 (EN)

Application

EP 99303831 A 19990517

Priority

JP 13528598 A 19980518

Abstract (en)

The present invention provides a wiping sheet produced from a sheet stock of at least one non-woven fabric such that a surface of the sheet stock is raised by partial cutting and loosening of fibers as it undergoes mechanical resistance. The wiping sheet is highly effective for both dry wiping and wet wiping, is bulky and has a good texture (i.e., soft touch). <IMAGE> <IMAGE>

IPC 1-7

D04H 1/08; **A47L 13/16**; **D04H 11/08**; **D04H 1/46**; **D06C 11/00**

IPC 8 full level

A47L 13/16 (2006.01); **D04H 1/46** (2006.01); **D04H 1/495** (2012.01); **D04H 1/54** (2006.01); **D04H 1/559** (2012.01); **D04H 11/08** (2006.01); **D04H 13/00** (2006.01); **D06C 11/00** (2006.01)

CPC (source: EP KR)

A47L 13/16 (2013.01 - EP KR); **A47L 13/20** (2013.01 - KR); **D04H 11/08** (2013.01 - EP); **D04H 13/00** (2013.01 - KR); **D06C 11/00** (2013.01 - EP)

Citation (search report)

- [PX] WO 9844181 A1 19981008 - KIMBERLY CLARK CO [US]
- [PX] WO 9920821 A1 19990429 - KIMBERLY CLARK CO [US]
- [A] US 4429014 A 19840131 - ISNER WILLIAM G [US], et al
- [A] US 4645699 A 19870224 - NEVEU JEAN-LOUIS [FR]
- [X] PATENT ABSTRACTS OF JAPAN vol. 097, no. 012 25 December 1997 (1997-12-25)
- [A] PATENT ABSTRACTS OF JAPAN vol. 014, no. 562 (C - 0788) 13 December 1990 (1990-12-13)

Cited by

EP1211342A1; SG113474A1; CN106671499A; US8500211B2; US10011953B2; US9028652B2; US10912681B2; WO2009005457A1; WO2006115759A1; US9439815B2; US9440394B2; US9452094B2; US9452093B2

Designated contracting state (EPC)

DE FR GB NL SE

DOCDB simple family (publication)

EP 0959164 A1 19991124; CA 2271457 A1 19991118; CN 1172625 C 20041027; CN 1236595 A 19991201; ID 23293 A 20000405; JP H11318791 A 19991124; KR 19990088366 A 19991227; SG 82612 A1 20010821; TW 438580 B 20010607

DOCDB simple family (application)

EP 99303831 A 19990517; CA 2271457 A 19990512; CN 99109473 A 19990518; ID 990451 D 19990517; JP 13528598 A 19980518; KR 19990017808 A 19990518; SG 1999002232 A 19990511; TW 88108126 A 19990518