

Title (en)

Multiply sheet of absorbent paper

Title (de)

Mehrlagige Bahn eines saugfähigen Papiers

Title (fr)

Feuille multiple de papier absorbant

Publication

EP 1319748 B2 20101201 (FR)

Application

EP 01403221 A 20011212

Priority

EP 01403221 A 20011212

Abstract (en)

[origin: EP1319748A1] The multilayer absorbent paper sheet, comprising two layers (12, 14) of cellulose wadding, each with a weight of 15 - 35 g/sq m, has the first layer embossed with a first set of motifs in selected zones (16), made from embossed protuberances (18) projecting towards the second layer (14) and forming open cells in the sheet's outer surface. <??>At least some of the protuberances (18) have their tips (19) attached to the inner surface of the second layer. The first layer of the paper has a second set of motifs made from a series of smaller embossed protuberances (38) of smaller dimensions than the first and having a higher density. The second set of protuberances are set in recesses (36) so that their tips (39) are in contact with the second layer and some are attached to it.

IPC 8 full level

D21H 27/40 (2006.01); **B31F 1/07** (2006.01)

CPC (source: EP US)

B31F 1/07 (2013.01 - EP US); **D21H 27/40** (2013.01 - EP US); **B31F 2201/0733** (2013.01 - EP US); **B31F 2201/0738** (2013.01 - EP US); **B31F 2201/0761** (2013.01 - EP US); **B31F 2201/0764** (2013.01 - EP US); **B31F 2201/0766** (2013.01 - EP US); **Y10T 156/1023** (2015.01 - EP US); **Y10T 428/24479** (2015.01 - EP US); **Y10T 428/24612** (2015.01 - EP US)

Citation (opposition)

Opponent :

- EP 1149552 A1 20011031 - GEORGIA PACIFIC FRANCE [FR]
- US 6106928 A 20000822 - LAURENT PIERRE [FR], et al
- US 5846636 A 19981208 - RUPPEL REMY [FR], et al
- US 6033523 A 20000307 - DWIGGINS JOHN H [US], et al

Cited by

US7413630B2; US7540939B2; EP2048283A1; EP1520930A1; FR2860527A1; EA016514B1; FR2918598A1; US8678806B2; WO2010015281A1; WO2023104741A1; US8216664B2; DE212021000359U1; IT202200003380A1; WO2009016274A3; WO2005033408A3; WO2023280722A1; IT202100017675A1; WO2023001852A1; IT202100019499A1

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)

EP 1319748 A1 20030618; EP 1319748 B1 20080430; EP 1319748 B2 20101201; EP 1319748 B9 20111102; AT E393856 T1 20080515; CA 2468208 A1 20030619; CA 2468208 C 20100824; DE 60133828 D1 20080612; DE 60133828 T2 20090520; DE 60133828 T3 20110622; DK 1319748 T3 20080901; DK 1319748 T4 20110307; ES 2305043 T3 20081101; ES 2305043 T5 20110415; MX PA04005261 A 20050323; NO 20033551 D0 20030811; NO 20033551 L 20031013; NO 334198 B1 20140113; PT 1319748 E 20080729; US 2005034828 A1 20050217; US 7413630 B2 20080819; WO 03050353 A2 20030619; WO 03050353 A3 20080103

DOCDB simple family (application)

EP 01403221 A 20011212; AT 01403221 T 20011212; CA 2468208 A 20021206; DE 60133828 T 20011212; DK 01403221 T 20011212; ES 01403221 T 20011212; FR 0204215 W 20021206; MX PA04005261 A 20021206; NO 20033551 A 20030811; PT 01403221 T 20011212; US 49821804 A 20040713