

Title (en)  
SOFT AND STRONG WEBS FROM HIGHLY REFINED CELLULOSIC FIBRES

Title (de)  
WEICHE UND BELASTBARE VLIESE AUS HOCHRAFFINIERTEN CELLULOSEFASERN

Title (fr)  
VOILES DOUX ET RESISTANTS EN FIBRES CELLULOSIQUES HAUTEMENT RAFFINEES

Publication  
**EP 1583869 B1 20080227 (EN)**

Application  
**EP 03813562 A 20031208**

Priority  

- EP 03813562 A 20031208
- EP 0313904 W 20031208
- EP 02028783 A 20021223

Abstract (en)  
[origin: EP1433898A1] The present invention relates to a soft and strong cellulose-based fibrous web, in particular tissue paper, comprising a) cellulosic fibres having a freeness value of more than 26 DEG SR measured according to DIN-ISO 5267/1 (March 1999), b) a water-soluble cationic polymer, c) a water-soluble anionic polymer, and d) a cationic surfactant-based softener, as well as a process for the preparation of these webs which comprises the steps of refining cellulosic fibres to a degree of freeness of more than 26 DEG SR, preferably at least 27 DEG SR, measured according to DIN-ISO 5267/1, adding at least one water-soluble anionic polymer and water-soluble cationic polymer to the refined cellulosic fibres, adding a cationic surfactant-based softener to the cellulosic fibres obtained thereby, and wet-laying and dewatering the cellulosic fibres obtained thereby. <??>The webs obtained are distinguished by a high wet-strength and a suitable balance of other properties such as softness, dry strength and absorbency.

IPC 8 full level  
**D21H 17/20** (2006.01); **D21H 17/42** (2006.01); **D21H 17/44** (2006.01); **D21H 21/20** (2006.01); **D21H 21/24** (2006.01); **D21H 27/30** (2006.01)

CPC (source: EP)  
**D21H 17/20** (2013.01); **D21H 17/42** (2013.01); **D21H 17/44** (2013.01); **D21H 21/20** (2013.01); **D21H 21/24** (2013.01); **D21H 27/30** (2013.01)

Cited by  
EP3516111A4; EP3515612A4; RU2670867C1; RU2670867C9; AU2015393147B2; AU2015393147B9; CN116289325A; US10577748B2; US8834677B2; WO2016173641A1; US9206555B2; US9410290B2; US9580870B2; US8702905B1; US8956503B2; US9051690B2; US8753751B1; US9234313B2; US9447545B2; US9580871B2; EP3289139B1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)  
**EP 1433898 A1 20040630**; AT E387541 T1 20080315; AU 2003296627 A1 20040714; DE 60319434 D1 20080410; DE 60319434 T2 20090226; EP 1583869 A1 20051012; EP 1583869 B1 20080227; ES 2300661 T3 20080616; PL 376004 A1 20051212; WO 2004057109 A1 20040708

DOCDB simple family (application)  
**EP 02028783 A 20021223**; AT 03813562 T 20031208; AU 2003296627 A 20031208; DE 60319434 T 20031208; EP 0313904 W 20031208; EP 03813562 A 20031208; ES 03813562 T 20031208; PL 37600403 A 20031208