

Title (en)
FILLER FOR PAPERMAKING PROCESS

Title (de)
FÜLLER FÜR DAS PAPIERHERSTELLUNGSVERFAHREN

Title (fr)
FILTRE POUR PROCÉDÉ DE FABRICATION DU PAPIER

Publication
EP 2037041 A1 20090318 (EN)

Application
EP 08172278 A 20041220

Priority
• EP 04809143 A 20041220
• EP 03445149 A 20031222
• EP 08172278 A 20041220

Abstract (en)
The present invention relates to a filler comprising calcium salt and anionic cellulose derivative having a degree of substitution of net anionic groups up to 0.60, wherein the filler is free from fibres or fibrils of cellulose or lignocellulose. The invention also relates to paper comprising the filler according to the invention. The invention further relates to a method of producing a filler which comprises mixing a calcium salt-containing material with an anionic cellulose derivative having a degree of substitution of net anionic groups up to 0.60 in the absence of fibres or fibrils of cellulose or lignocellulose. The invention further relates to a papermaking process which comprises providing an aqueous suspension containing cellulosic fibres, introducing into the suspension the filler according to the invention, and dewatering the suspension to form a web or sheet of paper.

IPC 8 full level
D21H 17/67 (2006.01); **D21H 17/26** (2006.01); **D21H 23/04** (2006.01)

CPC (source: EP KR)
D21H 3/00 (2013.01 - KR); **D21H 17/67** (2013.01 - EP KR); **D21H 23/00** (2013.01 - KR); **D21H 17/26** (2013.01 - EP); **D21H 17/675** (2013.01 - EP); **D21H 17/74** (2013.01 - EP); **D21H 23/04** (2013.01 - EP)

Citation (applicant)
• US 5514212 A 19960507 - KURRLE FREDERICK L [US]
• US 5972100 A 19991026 - DUMAS DAVID HOWARD [US]
• WO 9513324 A1 19950518 - MINERALS TECH INC [US]
• US 3730830 A 19730501 - DRISCOLL W
• US 5731080 A 19980324 - COUSIN LAURENT [FR], et al
• US 5824364 A 19981020 - COUSIN LAURENT [FR], et al
• US 6251222 B1 20010626 - SILENIUS PETRI [FI], et al
• US 6375794 B2 20020423 - SILENIUS PETRI [FI], et al
• US 6599391 B2 20030729 - SILENIUS PETRI [FI], et al
• US 4940785 A 19900710 - STOBER REINHARD [DE], et al
• US 4522686 A 19850611 - DUMAS DAVID H [US]
• BARTZ, W.; DARROCH, M.E.; KURRLE, F.L.: "Alkyl ketene dimer sizing efficiency and reversion in calcium carbonate filled papers", TAPPI JOURNAL, vol. 77, no. 12, 1994
• VOUTILAINEN, P.: "Competitive Adsorption of Alkyl Ketene Dimer on Pulp Fibers and CaCO₃ Fillers", PROCEEDINGS FROM INTERNATIONAL PAPER AND COATING CHEMISTRY SYMPOSIUM, 1996

Citation (search report)
• [X] WO 02086238 A1 20021031 - M REAL OYJ [FI], et al
• [X] US 5492560 A 19960220 - FAIRCHILD GEORGE H [US]
• [A] US 2003188738 A1 20031009 - LALEG MAKHLOUF [CA]
• [A] EP 0758695 A2 19970219 - JAPAN TOBACCO INC [JP], et al
• [A] US 4310360 A 19820112 - KVANT MAGNUS B
• [A] US 4196008 A 19800401 - KENNEDY-SKIPTON HENRY K [GB]
• [A] US 2572932 A 19511030 - HORSEY ELEANOR F, et al
• [A] GB 1400410 A 19750716 - ENGLISH CLAYS LOVERING POCHIN
• [A] EP 0261820 A1 19880330 - DU PONT [US]

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

DOCDB simple family (publication)
WO 2005061793 A1 20050707; AR 050757 A1 20061122; AU 2004303745 A1 20050707; AU 2004303745 B2 20081106; BR PI0418030 A 20070417; BR PI0418030 B1 20180925; CA 2550261 A1 20050707; CA 2550261 C 20120214; CN 101871181 A 20101027; CN 1898439 A 20070117; CN 1898439 B 20120425; DK 2037041 T3 20170116; DK 2325388 T3 20160704; EP 1704282 A1 20060927; EP 1704282 B1 20180425; EP 1704282 B2 20230830; EP 2037041 A1 20090318; EP 2037041 B1 20160928; EP 2325388 A1 20110525; EP 2325388 B1 20160406; ES 2578731 T3 20160729; ES 2630379 T3 20170821; ES 2675222 T3 20180709; JP 2007515572 A 20070614; JP 4799424 B2 20111026; KR 100810389 B1 20080304; KR 20060108725 A 20061018; LT 2037041 T 20161227; NZ 547789 A 20100326; PL 1704282 T3 20180928; PL 2037041 T3 20170731; PL 2325388 T3 20160930; PT 1704282 T 20180704; PT 2037041 T 20170102; PT 2325388 T 20160712; RU 2006126678 A 20080127; RU 2345189 C2 20090127; SI 2037041 T1 20170131; SI 2325388 T1 20160831; TR 201809764 T4 20180723; TW 200536993 A 20051116; TW I356862 B 20120121

DOCDB simple family (application)
SE 2004001970 W 20041220; AR P040104851 A 20041222; AU 2004303745 A 20041220; BR PI0418030 A 20041220; CA 2550261 A 20041220; CN 200480038513 A 20041220; CN 201010202833 A 20041220; DK 08172278 T 20041220; DK 10186029 T 20041220; EP 04809143 A 20041220; EP 08172278 A 20041220; EP 10186029 A 20041220; ES 04809143 T 20041220; ES 08172278 T 20041220; ES 10186029 T 20041220; JP 2006546916 A 20041220; KR 20067012294 A 20060621; LT 08172278 T 20041220; NZ 54778904 A 20041220; PL 04809143 T 20041220; PL 08172278 T 20041220; PL 10186029 T 20041220; PT 04809143 T 20041220; PT 08172278 T 20041220;

PT 10186029 T 20041220; RU 2006126678 A 20041220; SI 200432329 A 20041220; SI 200432366 A 20041220; TR 201809764 T 20041220;
TW 93139994 A 20041222