

Title (en)  
BLOCK COPOLYMERS OBTAINED USING RAFT

Title (de)  
MITTELS RAFT GEWONNENE BLOCKCOPOLYMERE

Title (fr)  
COPOLYMÈRES SÉQUENCÉS OBTENUS EN UTILISANT LE TRANSFERT DE CHAÎNE RÉVERSIBLE AVEC ADDITION-FRAGMENTATION (RAFT)

Publication  
**EP 2276782 A1 20110126 (EN)**

Application  
**EP 09745825 A 20090515**

Priority  
• EP 2009055924 W 20090515  
• EP 08156241 A 20080515  
• EP 09745825 A 20090515

Abstract (en)  
[origin: WO2009138493A1] A process for preparing an aqueous coating composition comprising a block copolymer and a polymer P; wherein the block copolymer comprises at least blocks [A]<sub>x</sub>[B]<sub>y</sub>, where block [A] is obtained by a controlled radical polymerisation of at least one ethylenically unsaturated monomer via a reversible addition-fragmentation chain transfer (RAFT) mechanism in solution in the presence of a control agent and a source of free radicals; and where block [A] has an average degree of polymerisation (DP) from 3 to 80 and comprises i) 0 to 50 mol % of ethylenically unsaturated monomer unit s bearing adhesion promoting functional groups; ii) 20 to 100 mol % of ethylenically unsaturated monomer unit s bearing water-dispersing functional groups; iii) 0 to 50 mol % of C1-18 hydrocarbo (meth)acrylate monomers and/or styrenic monomers; and iv) 0 to 35 mol % of ethylenically unsaturated monomers different from i), ii) or iii); where block [B] has a DP = 10; and comprises i) 5 to 60 mol % of ethylenically unsaturated monomer unit s bearing adhesion promoting functional groups; ii) 0 to 15 mol % of ethylenically unsaturated monomer unit s bearing water-dispersing functional groups; iii) 20 to 95 mol % of C1-18 hydrocarbo (meth)acrylate monomers and/or styrenic monomers; and iv) 0 to 35 mol % of ethylenically unsaturated monomers different from i), ii) or iii); and where polymer P is obtained by an emulsion polymerisation process in the presence of the block copolymer [A]<sub>x</sub>[B]<sub>y</sub>, and comprises: i) 0 to 15 wt % of ethylenically unsaturated monomer unit s bearing adhesion promoting functional groups; ii) 0 to 15 wt % of ethylenically unsaturated monomer unit s bearing water-dispersing functional groups; iii) 50 to 100 mol % of C1-18 hydrocarbo (meth)acrylate monomers and/or styrenic monomers and/or styrenic monomers; and iv) 0 to 35 wt % of ethylenically unsaturated monomer unit s different from i), ii) or iii).

IPC 8 full level  
**C08F 293/00** (2006.01); **C08F 2/38** (2006.01); **C08L 51/00** (2006.01); **C08L 53/00** (2006.01); **C09D 151/00** (2006.01); **C09D 153/00** (2006.01)

CPC (source: EP)  
**C08F 2/22** (2013.01); **C08F 2/38** (2013.01); **C08F 4/00** (2013.01); **C08F 293/005** (2013.01); **C08L 51/003** (2013.01); **C08L 51/006** (2013.01); **C08L 53/00** (2013.01); **C09D 151/003** (2013.01); **C09D 153/00** (2013.01)

Citation (search report)  
See references of WO 2009138493A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)  
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DOCDB simple family (publication)  
**WO 2009138493 A1 20091119**; CN 102027029 A 20110420; CN 102027029 B 20140528; EP 2276782 A1 20110126

DOCDB simple family (application)  
**EP 2009055924 W 20090515**; CN 200980117542 A 20090515; EP 09745825 A 20090515