

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
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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]_x[B]_y, 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]_x[B]_y, 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

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Designated extension state (EPC)
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DOCDB simple family (publication)
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