

Title (en)
HEAT-SENSITIVE WATER SOLUBLE COPOLYMERS BASED ON (POLY)ETHOXYLATED (METH)ACRYLATE, METHOD FOR MAKING SAME AND USE FOR PREPARING ADHESIVE FILMS AND BINDERS FOR TEXTILE WEBS

Title (de)
WASSERLÖSLICHE COPOLYMERISATE AUS POLYETHYLENOXID METHACRYLATEN, IHRE HERSTELLUNG UND IHRE VERWENDUNG ZUR HERSTELLUNG VON FOLIEN

Title (fr)
COPOLYMERES HYDROSOLUBLES THERMOSENSIBLES A BASE DE (METH)ACRYLATE (POLY)ETHOXYLE, LEUR FABRICATION ET LEUR UTILISATION POUR LA PREPARATION DE FILMS, ADHESIFS ET LIANTS POUR NAPPES FIBREUSES

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Application
EP 01949527 A 20010626

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Abstract (en)
[origin: FR2810669A1] A copolymer of thermosensitive solubility comprising hydrophobic units obtained from a specified monomer composition The polymer has a LCST of 6-95 deg C and the monomer composition comprises (all hydrosoluble): (A) a compound of formula (I) or (II) (10-69 pts.mol.); (B) an ethylenically unsaturated sulfonic acid (30-75 pts.mol.); (C) a compound of formula (III) or (IV) (0-50 pts.mol.) (D) a compound of formula (V) or (VI) (0-30 pts.mol.); (E) compounds of formula (VII) or (VIII) or ethylenically unsaturated monomers which are sulfonated, silanated or phosphonated or have phosphate groups, or monomers having N-vinyl groups, or compounds of formula (IX), acrylonitrile, allyl alcohol, vinylpyridine, N-(meth)acryloyltris(hydroxymethyl) methylamine, 2-sulfoethyl (meth)acrylate, 2-(acetoacetoxy)ethyl (meth)acrylate (0-30 pts.mol.); and (F) at least one hydrophobic monomer (0.001-50 pts.mol.). Independent claims are also included for: (1) preparation by radical polymerization in an aqueous or organic or mixed solvent medium; (2) a mixture in aqueous medium of one or more of the claimed polymers with a hydrophobic (co)polymer; (3) use of the claimed polymers for the fabrication of hydrodispersible or hydrodisintegrable films, especially those forming part of hydrodisintegrable hygiene articles, for such films; and (4) use of the polymers as binders for fiber tissues or as components of adhesives, especially those forming part of hydrodisintegrable hygiene articles and for hygiene articles, especially disposable comprising in any form the claimed copolymer or a mixture with at least 50 wt.% of hydrophobic polymer. CH₂=C(R<1>)-C(O)-O-(R<2>-O)n-R<3> (I) H-C(R<4>)=C(R<5>)-Y<1>-O-(R<6>-O)o-R<7> (II) CH₂-C(R<8>)-C(O)-O-(R<9>-O)p-(R<10>-O)q-R<11> (III) H-C(R<12>)=C(R<13>-Y<2>-O-(R<14>-O)r-(R<15>-O)s-R16 (IV) CH₂=C(R<17>)-C(O)-O-(R<18>-O)t-R<19> (V) H-C(R<20>)=C(R<21>)-Y<3>-O-(R<22>-O)u-R<23> (VI) CH₂=C(R<24>)-C(O)-A<1>B<1>N<+>(R<27>)(R<25>)(R<26>)X<-> (VII) CH₂=C(R<28>)-C(O)-A<2>B<2>N(R<29>)(R<30>) (VIII) CH₂=C(R<31>)-C(O)-N(R<32>)(R<33>) (IX) R<1>, R<3>, R<7>, R<8>, R<11>, R<16>, R<17>, R<24>, R<28>, R<31> = H or CH₃; R<2>, R<6>, R<9>, R<10>, R<14>, R<15>, R<18>, R<22> = 2-4C alkylene optionally bearing one or more OH groups; n, o, p, r, t, u = integer 1-70; R<4>, R<5>, R<12>, R<13>, R<20>, R<21> = H or 2-4C alkyl; Y<1>, Y<2>, Y<3> = null or 1-4C alkyl; q, s = integer 1-40; R<19>, R<23> = 2-40C alkyl chain, 6-60C aryl or aralkyl; A<1>, A<2> = -O- or -NH-; B<1>, B<2> = -CH₂CH₂-, -CH₂CH₂CH₂-, CH₂CHOHCH₂-; R<27> = H, CH₃ or 2-16C alkyl chain; X<+> = monovalent anion; R<29>, R<30> = CH₃ or 2-16C alkyl chain; and R<32>, R<33> = H, 1-5C alkyl optionally bearing one or more OH groups, alkoxy(1-5C)alkyl(1-5C).

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