

Thermotropic polymers

A b s t r a c t

Polymer particles having a mean primary particle diameter d_{50} between 50 nm and 10 μ m based on the total weight, containing: A. 10 to 100% by weight of a polymer phase A, obtainable by free-radical copolymerization of an oil-in-water miniemulsion having a monomer mixture as oil phase, containing i) 30 to 99.9% by weight of one or more monoethylenically unsaturated monomers II having at least one C_{12} - C_{48} -n-alkyl side chain, ii) 0 to 60% by weight of one or more monoethylenically unsaturated monomers II having at least one C_1 - C_{11} -n-alkyl and/or one C_3 - C_{48} -i-alkyl side chain, iii) 0.1 to 20% by weight of one or more monomers III having at least two non-conjugated ethylenic double bonds, iv) 0 to 69.9% by weight of one or more (hetero)aromatic, mono-ethylenically unsaturated monomers IV, v) 0 to 40% by weight of one or more other mono-ethylenically unsaturated monomers V; and B. 0 to 90% by weight of a polymer phase B, obtainable by subsequent free-radical graft copolymerization, in the presence of the polymer phase A obtained after stage A), of a monomer mixture containing i) 0 to 100% by weight of one or more monomers VI from the group of C_1 - C_{10} -alkyl (meth)acrylates, ii) 0 to 100% by weight of one or more (hetero)aromatic, monoethylenically unsaturated monomers VII, iii) 0 to 50% by weight of one or more other monoethylenically unsaturated monomers VIII, where the percentages by weight of the monomer mixtures used in the respective stages add up to 100% by weight.

[Fig 1]