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(54) Title: WATERBORNE HYBRID POLYMER DISPERSION

(57) Abstract: The invention relates to a process for the manufacture of an auto-oxidatively cross-linking hybrid polymer, in particular an aqueous hybrid polymer dispersion, comprising the step of reacting in a mini-emulsion process one or more ethylenically unsaturated monomers to form an addition polymer (also referred to as a vinyl polymer) in the presence of a modified auto-oxidatively crosslinkable (AOC) polymer which has been modified with terminal unsaturated groups of the formula $C(R_1)=CH_2$ wherein R_1 can be hydrogen, alkyl or aryl and wherein the modified AOC polymer is a hydrophobic polymer having an acid number between 5 to 30. In particular, the invention relates to a process comprising mixing one or more modified AOC polymers, one or more ethylenically unsaturated monomers and one or more surfactants and forming a mini-emulsion in water and addition polymerizing the unsaturated monomers in the mini-emulsion to form a dispersion of hybrid particles of the modified auto-oxidatively crosslinkable polymer and the addition polymer. The invention further relates to the aqueous hybrid polymer dispersion obtainable by the process according to the invention, the use thereof for the manufacture of coating compositions, ink compositions or adhesives and to coating compositions comprising the hybrid polymer dispersion as a binder.

