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(54) Title: PROCESS FOR PREPARING HYDROXY-FUNCTIONALIZED POLYBUTADIENE

(57) Abstract: The present invention relates to a process for preparing hydroxy-functionalized polydiene, preferably polybutadiene or polyisoprene, by reacting monomer diene with hydrogen peroxide in the presence of a hydrophilic organic solvent, wherein the total amount of monomer diene used is added to the reaction in at least two parts, wherein the second part of the monomer diene is added to the reaction at a temperature of the reaction mixture that is at least +5 K different from the temperature of the reaction mixture at the addition of the first part of the monomer diene, to hydroxy-functionalized polybutadiene, having a dispersity index D below 2.7, a viscosity at 30 °C below 3200 mPa*s, an OH-number of from 50 to 90, a number average molecular weight Mn of from 1.6 to 2.5 kDa, and a weight number average molecular weight Mw of from 4.0 to 5.6 kDa, and comprising the monomer units derived from 1,3-butadiene in a specific ratio, and use of the hydroxy-functionalized polybutadiene, for the production of polyurethane-based thermo- or electro-insulation, adhesives or sealants or polyesters.



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