

Hydroxylamino Polymer and Method for the Production thereof

Abstract

The present invention relates to a process for the preparation of a hydroxy-amino polymer, comprising the steps: a) reacting an H-functional starter compound carrying at least one Zerewitinoff-active H atom with an unsaturated cyclic carboxylic acid anhydride to give a carboxyl-group-carrying prepolymer, b) reacting the carboxyl-group-carrying prepolymer with at least one epoxide compound to give a hydroxyl-group-carrying prepolymer, c) adding a primary amine and/or ammonia to the double bond of the hydroxyl-group-carrying prepolymer obtained according to step b) to give the hydroxy-amino polymer, wherein the ratio of the amount of carboxylic acid anhydride to the number of Zerewitinoff-active H atoms of the H-functional starter compound is so chosen that almost all the Zerewitinoff-active H atoms of the H-functional starter compound are reacted. The invention relates additionally to a hydroxy-amino polymer obtainable by the above-mentioned process, wherein the ratio of the amount of unsaturated cyclic carboxylic acid anhydride to the number of Zerewitinoff-active H atoms of the H-functional starter compound is at least approximately 0.9:1, and further to the use of this hydroxy-amino polymer in the preparation of a polyurethane urea polymer.