

[Name of the Document] Abstract

A method for producing styrene-modified linear low-density polyethylene-based resin beads, which includes the

5 steps of: dispersing 100 parts by weight of non-crosslinked linear low-density polyethylene-based resin beads which are polymerized using a metallocene compound as a catalyst and contain an inorganic nucleating agent, 50 to 800 parts by weight of a styrene-based monomer and 0.1 to 0.9 parts by

10 weight of a polymerization initiator relative to 100 parts by weight of the styrene-based monomer into an aqueous suspension containing a dispersant; impregnating the polyethylene-based resin beads with the styrene-based monomer under heating the resulting dispersion at such a

15 temperature that the styrene-based monomer does not substantially polymerize; and performing polymerization of the styrene-based monomer at a temperature of $(T + 10)$ to $(T + 35)^{\circ}\text{C}$ where $T^{\circ}\text{C}$ is a crystallization peak temperature of the polyethylene-based resin beads.