

Title (en)

POLYMER MIXTURE HAVING IMPROVED RHEOLOGICAL PROPERTIES AND IMPROVED SHRINKING BEHAVIOUR

Title (de)

POLYMERMISCHUNG MIT VERBESSERTEN RHEOLOGISCHEN EIGENSCHAFTEN SOWIE VERBESSERTEM SCHRUMPFVERHALTEN

Title (fr)

MELANGE POLYMERES PRESENTANT DES PROPRIETES RHEOLOGIOQUES AMELIOREES ET UNE MEILLEURE RETRACTILITE

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Application

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Abstract (en)

[origin: WO03000796A1] The invention relates to a thermoplastic polymer mixture containing m, m representing a natural number higher than 1, polymers P_n wherein n represents a natural number between 1 and m, and at least one recurring functional group contained in the P_n polymer chain, said group(s) having the structure -(R<1>)x-C(O)-(R<2>)y- wherein x and y independently represent 0 or 1, and x + y = 1, and R<1>, R<2> independently represent oxygen or nitrogen linked into the main polymer chain. The polymers P_n differ in terms of at least one characteristic related to molecular weight. The polymer mixture has a number average molecular weight Mn(P)₁, a weight average molecular weight Mw(P)₁, a Z average molecular weight Mz(P)₁, a heterogeneity index Mw(P)₁/Mn(P)₁ and a molecular weight Mp(P)₁ defined according to DIN 55672-2 in hexafluoroisopropanol as an elution agent. After maintaining the polymer mixture at the melting point of the same, defined according to ISO 11357-1 and 11357-3, for five minutes, the polymer mixture has a number average molecular weight Mn(P)₂, a weight average molecular weight Mw(P)₂, a Z average molecular weight Mz(P)₂, a heterogeneity index Mw(P)₂/Mn(P)₂, and a molecular weight Mp(P)₂ defined according to DIN 55672-2 in hexafluoroisopropanol as an elution agent. The values Mn(P)₂, Mw(P)₂, Mz(P)₂, Mw(P)₂/Mn(P)₂ and Mp(P)₂ lie within the triple replication standard deviation sigma (r) in relation to Mn(P)₁, Mw(P)₁, Mz(P)₁, Mw(P)₁/Mn(P)₁ and Mp(P)₁ according to DIN 55672-2 in hexafluoroisopropanol as an elution agent.

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