

Title (en)
PROCESS FOR PRODUCING A POLYMER COMPOSITION

Title (de)
VERFAHREN ZUR HERSTELLUNG EINER POLYMERZUSAMMENSETZUNG

Title (fr)
PROCÉDÉ DE PRODUCTION D'UNE COMPOSITION POLYMÈRE

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Application
EP 20737484 A 20200715

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Abstract (en)
[origin: WO2021009190A1] The present invention concerns a process for producing a polymer composition characterized in that a prepolymer based on ethylene (P) is obtained in a prepolymerization zone by polymerization conducted in slurry in the presence of ethylene, optionally at least one comonomer selected from alpha-olefins having from 4 to 10 carbon atoms and optionally hydrogen and a first ethylene polymer component (A) is obtained in a first polymerization zone by polymerization conducted in slurry in the presence of ethylene, optionally at least one comonomer selected from alpha-olefins having from 4 to 10 carbon atoms and optionally hydrogen and a second ethylene polymer component (B) is obtained in a second polymerization zone by polymerization conducted in slurry in the presence of ethylene, first ethylene polymer component (A), at least one comonomer selected from alpha-olefins having from 4 to 10 carbon atoms and optionally hydrogen and a third ethylene polymer component (C) is obtained in a third polymerization zone by polymerization conducted in gas phase in the presence of ethylene and, at least one comonomer selected from alpha-olefins having from 4 to 10 carbon atoms, to produce a multimodal polymer of ethylene (a) with at least one comonomer selected from alpha-olefins having from 4 to 10 carbon atoms, -which has a) a density between 900 and 960 kg/m³ b) MFR 2 of 0.1 to 25g/10 min (according to ISO 1133 at 190°C under 2.16 kg load), c) MWD of 2 to 6, -which comprises at least -between 0.5 to <5 wt% of a prepolymer based on ethylene (P) -between 10 to < 25 wt% of an ethylene polymer component (A), -between 10 to < 25 wt% of an ethylene polymer component (B) and -between > 51 and 79.5 wt% of an ethylene polymer component (C) and wherein the densities of ethylene polymer components (A) and (B) are each between 925 and 970 kg/m³ and the density of ethylene polymer component (C) has a density between 880 and 950 kg/m³, wherein further the ethylene polymer components (A), (B) and (C) have different MFR2 values.

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