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(54) Title: HDPE LPBM RESIN USING ADVANCED CHROME CATALYST BY POLYETHYLENE GAS PHASE TECHNOLOGY

(57) Abstract: According to one embodiment, a process for producing a unimodal ethylene/ α -olefin copolymer, the process comprising contacting ethylene and one or more (C_3-C_{12}) α -olefin comonomers with a chromium-based catalyst system in a gas-phase polymerization reactor to produce the unimodal ethylene/ α -olefin copolymer; wherein the unimodal ethylene/ α -olefin copolymer comprises: a density from 0.952 g/cm³ to 0.957 g/cm³; a flow index (I_{21}) from 4.0 to 6.2 dg/min; a melt viscosity ratio ($V_{0.1}/V_{100}$) at 190 °C of 55 to 75; a molecular weight distribution (MWD) as calculated by the weight average molecular weight (M_w) divided by the number-average molecular weight (M_n) (M_w/M_n); and a peak molecular weight (M_p), all as measured by gel permeation chromatography.

WO 2023/064917 A1