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(54) Title: COPOLYMERS AND FILMS THEREOF

(57) Abstract: Copolymers of ethylene and α -olefins having C7 - C12 carbon atoms having : (a) a density (D) in the range 0.900 - 0.940 g/cm³, (b) a melt index MI₂ (2.16 kg, 190°C) in the range of 0.01 - 50 g/10 min, (c) a melt elastic modulus G' (G''= 500 Pa) in the range 20 to 150 Pa, and (d) a tear strength (MD) of ≥ 220 g, a tear strength (TD) of ≥ 470 g, and a Dart Drop Impact (DDI) of ≥ 1800 g of a blown film having a thickness of 25 μ m produced from the copolymer; where MD is referred to the machine direction and TD is the transverse direction of the blown film are suitably prepared in the gas phase by use of a supported metallocene catalyst system. Particularly suitable are copolymers of ethylene and 1-octene and the resultant blown films show improved processability and exhibit an improved balance of film properties of dart impact and tear strength.



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