

POLYETHYLENE BASED ORIENTED TAPES AND MONOFILAMENTS, AND METHOD OF MAKING THE SAME

Abstract

The present disclosure provides for a tape or monofilament of a polyethylene composition comprising less than or equal to 100 percent by weight of the polyethylene composition derived from ethylene monomers, and less than 20 percent by weight of the polyethylene composition derived from one or more α -olefin monomers, where the polyethylene composition of the tape or monofilament has a density in the range of 0.920 to 0.970 g/cm³, a molecular weight distribution (M_w/M_n) in the range of 1.70 to 3.5, a melt index (I_2) in the range of 0.2 to 50 g/10 minutes, a molecular weight distribution (M_z/M_w) in the range of less than 2.5, vinyl unsaturation of less than 0.1 vinyls per one thousand carbon atoms present in the backbone of the polyethylene composition, where the tape or monofilament has a decitex of greater than 500 g/10,000 m.