

Biaxially oriented polypropylene film, method for preparing the same and use thereof.

ABSTRACT

The invention relates to biaxially oriented polypropylene film comprising a composition comprising a polypropylene and a beta-nucleating agent, wherein: the biaxially oriented polypropylene film has a porosity calculated according to the following formula of less than 0.01, alternatively 0.001, alternatively 0.0001, alternatively 0.00001, alternatively about 0-0.00001,

$$\text{Porosity} = [1 - (d_1/d_0)] \cdot 100$$

wherein d_1 is the density of the biaxially oriented polypropylene film after stretching, and d_0 is the density of the biaxially oriented polypropylene film before stretching; and the composition has a crystallization half-time at 136°C in the range of 1 to 10 min, preferably 2-6 min determined by differential scanning calorimetry under isothermal conditions; an MFR₂ in the range of 2-10 g/10 min, preferably 2-5 g/10 min; and the polypropylene has a tacticity in the range of 93 to 99 %, preferably 94 to 98 %, a method for preparing the same and an article using the same.

Fig. 1