

METHOD OF PRODUCING INFLATION FILM, APPARATUS THEREFOR AND
MOLDED ARTICLES THEREOFABSTRACT OF THE DISCLOSURE

A method of producing an inflation film comprising the steps of melting an ultra-high-molecular-weight polyolefin in an extruder, extruding the molten polyolefin from a screw die, and blowing a gas into a molten tubular film formed by extrusion. An apparatus for producing an inflation film comprises an extruder provided with a first screw, and a screw die having an L/D of at least 5 and is provided at the end of the extruder, wherein the screw die comprises a second screw which rotates independently of the first screw, a mandrel coupled to the end of the second screw and rotates together with the second screw, an outer tube die in which the mandrel is inserted, and a gas passage extending in the second screw and in the mandrel. An inflation film comprises an ultra-high-molecular-weight polyolefin having a tensile strength at break of greater than 1660 kg/cm² in a machine direction and greater than 1600 kg/cm² in a transverse direction, an impact strength of greater than 9500 kg·cm/cm, a thickness of from 10 to 1000 μm, an R-value of not larger than 10 μm and an intrinsic viscosity [η] of at least 7 dl/g.

Fig 1



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