

ABSTRACT

A method for preparing polyolefin pellets by cutting a raw material containing a molten polyolefin resin which is extruded from an extrusion orifice 121 of a die 12 into a predetermined length with an underwater cutter 14 which is set in close vicinity to the die surface of the die 12 and rotates in water, thereby obtaining polyolefin pellets, wherein the method satisfies the following (A) to (C) simultaneously:

(A) the average linear velocity u of the raw material passing through the extrusion orifice 121 as defined by the equation (Eq-1) is equal to or more than 50 mm/sec and equal to or less than 650 mm/sec,

(B) the virtual aspect ratio r as defined by the equation (Eq-2) is equal to or less than 1.6, and

(C) r/u as obtained by dividing the virtual aspect ratio r by the average linear velocity u is equal to or more than 0.002.

[In the equations (Eq-1) and (Eq-2) below, Q is an extrusion flow rate (mm^3/sec) of the raw material per orifice of the extrusion orifices, R is a radius (mm) of the extrusion orifice, and t is a cutting time (sec) defined as an inverse number of the number which is obtained by multiplying the number of revolutions of the underwater cutter by the number of blades of the underwater cutter].

$$u = \frac{Q}{\pi \times R^2} \quad \text{-----} \quad (\text{Eq-1})$$

$$r = \frac{Q \times t}{2 \times \pi \times R^3} \quad \text{-----} \quad (\text{Eq-2})$$