

ABSTRACT OF THE DISCLOSURE

A die-expanded molding method for synthetic resins in which starting material beads 5 are packed into a cavity 4 formed by a core mold 2 and cavity mold 3, the material is heated, expanded, and fused to form a molded product, and the molded product is cooled and released from the mold, wherein the starting material beads are packed as packing air is expelled from a clearance 18 formed between the core mold 2 and cavity mold 3, thereby improving the packing properties of the starting material beads 5 in the outer circumferential portion 4a of the cavity 5; at least the chamber on the back side of the core mold 2 side, where narrow, bottomed portions 40 that are difficult to pack with the starting material beads 5 are formed, is maintained at a negative pressure relative to the atmospheric pressure of the starting material beads packed by a packer 26 into the cavity 4; and part of a predetermined packing amount of the starting material beads 5 is delivered and packed in a concentrated manner in the portions 40 that are difficult to pack, while the rest of the predetermined packing amount is subsequently delivered to pack all of the starting material beads 5 in the cavity 4, thereby improving the packing properties of the starting material beads 5 in the portions 40 that are difficult to pack in the cavity 5.