

SPINNABILITY AND THEORETICAL ANALYSIS OF THE SPUNBOND PROCESS FOR POLYPROPYLENE

Oral presentation
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ABSTRACT:

The spinnability of the spunbond process for polypropylene (PP) was investigated and narrow molecular weight distribution PP had good spinnability. Furthermore, adding low modulus polypropylene (LMPP) to PP could control the crystallization speed and gave good spinnability. A small amount of LMPP was found to stabilize the high speed spinning of PP and very fine fibers were obtained. The theoretical analysis of the spunbond process was set up and applied to PP and its blends. The effect of blending LMPP to high tacticity PP on the spinnability of the spunbond process was investigated. From the calculated results, it was speculated that the improvement of spinnability originated from the suppression of crystallization speed, strain rate in the spinning process and high molecular weight.

Keywords: spunbond, polypropylene, spinnability, crystallization speed