

BIAXIALLY ORIENTED SHRINKAGE PA6 FILM

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ABSTRACT

In the market place, a shrinkage film which is adapted to both environmental and barrier problems is desired. Polyvinylidene chloride film is a popular shrinkage film for food packaging, but when this film is incinerated, it generates toxic materials such as chlorine gas and dioxins. In recent times, environmental problems have come into question in the packaging industry. A biaxially oriented polyamide 6 (PA6) film produced by the double bubble tubular film process is suitable for shrinkage film. To produce high shrinkage film, the influence of process conditions and material design on shrinkage property is investigated in this report. The heat setting temperature can easily control the shrinkage, density and other physical properties. The blend of PA6-66 and poly(m-xylylene adipamide) (MXD6) can achieve a barrier as effective as polyvinylidene chloride, and the shrinkage film from this blend has an easy and straight tear, allowing for easy opening of the product. The material and production technology of a PA6 film could solve high shrinkage, environmental and long life packaging problems.

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