

Recent developments in PA6/PP nanocomposites

Abstract

An overview of the recent developments in PA6/PP blend nanocomposites is presented in this paper with an emphasis on their mechanical, thermal and morphological properties. The role of organoclay as a reinforcing agent and polyethylene octene (POE) as an elastomer are discussed in detail. The organoclay increases the strength and stiffness while the POE elastomer increases the impact toughness of the nanocomposites. The effects of various parameters such as PA6/PP blend ratio, organoclay loading and the concentration of elastomer on the nanocomposites properties are also examined. The exfoliated state of organoclay platelets along with the fine particle size and uniform dispersion of POE demonstrate the nanocomposite with improved properties. These materials are attracting considerable interest in polymer research community because they exhibit substantial improvement in properties at low filler contents.