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Effects of trans-polyoctylene rubber in polypropylene/recycled acrylonitrile butadiene/rice husk powder composites

Abstract

Composites of polypropylene/Acylonitrile butadiene rubber/Rice husk powder/ (PP/NBRr/RHP) with and without *trans*-polyoctylene rubber (TOR) were prepared, and the effects of trans-polyoctylene rubber were investigated. By using rice husk powder of 150300μm, five different compositions of PP/NBRr/RHP composites (i.e.100/0, 80/20, 70/30, 60/40 and 40/60 phr) were prepared in an internal mixer at 180 °C and 50 rpm rotor speed. The results indicate that the incorporation of TOR improved the tensile properties of PP/NBRr/RHPcomposites. Scanning electron microscopy of the fractured surfaces proved that TOR promoted good adhesion between the PP-NBRr matrices and RHP.

Keywords; Polypropylene (PP); Trans-polyoctylene rubber; Rice husk powder; Acrylonitrile Butadiene rubber; Composite