

The effect of EVA on composite that made of PP nanoclay

ABSTRACT

This study presents an investigation of the effects of Ethylene Vinyl Acetate (EVA) on Polypropylene (PP)/Clay type of composite. The PP/EVA/clay composite samples are prepared via melt blending technique. The chemical characterization is carried out using fourier transform infrared (FT-IR) spectroscopy. The mechanical properties are characterized in terms of tensile, flexural and impact tests. The presence of high EVA content in PP nanoclay decreases the flexural and tensile strength. The addition of EVA reveals significant increment in impact strength. Thermal properties of composites are studied using thermogravimetric analysis (TGA). The decomposition temperature increases with an addition of EVA content up to 15 phr, but decreases of the crystallinity and melting temperature.

Keyword: Clay; Ethylene vinyl acetate; Polypropylene