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Physico-mechanical, thermal and morphological properties of furfuryl alcohol/2-ethylhexyl methacrylate/halloysite nanoclay wood polymer nanocomposites (WPNCs)

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Abstract

In this study, the physical, morphological, mechanical and thermal properties of furfuryl alcohol/2-ethylhexyl methacrylate/halloysite nanoclay wood polymer nanocomposites (FA-co-EHMA-HNC WPNCs) were investigated. FA-co-EHMA-HNC WPNCs were prepared *via* an impregnation method and the properties of the nanocomposites were characterized through the weight percent gain, Fourier transform infrared (FT-IR) spectroscopy, scanning electron microscopy (SEM), three-point flexural test, dynamic mechanical thermal analysis (DMTA), thermogravimetric analysis (TGA), differential scanning calorimetry (DSC) analysis and moisture absorption test. The weight percent gain in the 50:50

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