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**Compatibility of HDPE-EVA Nanocomposites:
Morphology and Mechanical Properties**

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Morphological and mechanical properties of high-density polyethylene (HDPE)-ethylene vinyl acetate (EVA) nanocomposites were investigated. Morphological characterization using wide angle X-ray scattering (WAXS) and transmission electron microscopy (TEM) have indicated the presence of intercalated morphologies interspersed with tactoids or agglomeration of clay layers with the matrix. WAXS has shown that increasing EVA9 content into HDPE has decreased crystallinity, thus increasing amorphous phase content. Addition of clay too has produced decrease in crystallinity and an increase in 'rigid' amorphous content. The tensile modulus has shown an increase with clay content for a particular HDPE-EVA9 blend, while producing no significant change in tensile strength.