

عنوان مقاله:

Investigation of the Effect of EVA and Nanoclay on LDPE-LLDPE Packaging Film Properties- Part 1: Mechanical and Morphological Studies

محل انتشار:

دوازدهمین سمینار بین المللی علوم و تکنولوژی پلیمر (سال: 1395)

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خلاصه مقاله:

This study, investigates the effects of addition of EVA and nanoclay on mechanical and morphological properties of traditional LDPE-LLDPE packaging films. The results of mechanical tests showed that the nanocomposites containing 3 phr clay nanoparticles and a matrix containing 50% of EVA provide optimum properties. XRD patterns of the nanocomposites also showed that the Exfoliated/Intercalated structure achieved. XRD results were confirmed by TEM images. Scanning electron micrographs show that the morphology of the blends containing 40% and higher of EVA, changed from the Matrix-Disperse structure to the Co-Continuous structure. Addition of EVA has led an improvement of the toughness properties in these blends and nanocomposites; On the other hand, addition of clay nanoparticles, increase the stiffness properties of the blends and nanocomposites. The impact and tear resistance properties of these nanocomposite films have also investigated

کلمات کلیدی:

LDPE/LLDPE Blend- EVA- Nanoclay- Mechanical Properties- Morphology- Packaging Films

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