

Effects of PP-g-SAN on the PP/Clay Nanocomposites

김용수, 승유탉, 김우년*

고려대학교

(kimwn@korea.ac.kr*)

The effects of the polypropylene-g-poly(styrene-co-acrylonitrile) (PP-g-SAN) copolymer on the polypropylene (PP)/clay nanocomposites were investigated by WAXD, TEM, UTM and DMTA. In the study of WAXD pattern of the PP-g-SAN/clay nanocomposite, the d-spacing of the peak was increased. TEM images showed that the clay layers were visually exfoliated and WAXD patterns of these nanocomposites showed a good agreement with that of the morphology. The PP/PP-g-SAN/clay nanocomposite showed higher values of mechanical properties than the PP/clay nanocomposite. From the results of the morphological, thermal, mechanical, and dynamic mechanical studies, it is suggested that the PP-g-SAN copolymer could act as an effective compatibilizer in the PP/claynanocomposites.

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