

**Название публикации:**

Investigation of polypropylene/low-density polyethylene blends

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**Аннотация:**

Thermal and morphological study of blends based on isotactic polypropylene (iPP) and low-density polyethylene (LDPE) in a wide range of compositions were investigated by differential scanning calorimetry and electron paramagnetic resonance spectroscopy (paramagnetic probe method). The partial compatibility in the amorphous regions of iPP and LDPE providing the interface layer formation was observed for the blends containing 30-95 wt% of iPP. There was a plasticizing effect of LDPE on iPP, increasing the segmental mobility of the macromolecules chains in its amorphous phase. If the content of iPP in the blend was less than 30 wt%, the non-equilibrium molecular structure of the iPP/LDPE composition with a more rigid interface layer was formed. © 2016 by Apple Academic Press, Inc.

**Ключевые слова:**

Blends, Differential scanning calorimetry, Electron paramagnetic resonance spectroscopy, Polyethylene, Polypropylene, Structure