

عنوان مقاله:

Effects of temperature changes and chain extender in properties recovering of recycled PET during solid state postcondensation

محل انتشار:

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خلاصه مقاله:

In this work , we used of Pyromellitic dianhydrid (PMDA) as a chain extender and solid state polycondensation (SSP) at the same time in order to recovering of intrinsic viscosity (IV). IV and end groups concentration measurements showed that the presence less than 1 wt./ of PMDA and higher temperature ranges during SSP led to the best results to wasted molecular weight recovering in recycled PET (r-PET) , and flowing it in intrinsic viscosity recovering. Also, PMDA existence with certain percent in PET to provide possibility of more byproducts emitting (ethylene glycol and water) from SSP reactor. Hence , in this article it was seen that esterification and transesterification reaction rates during SSP both in samples with or without chain extender increased with temperature increasing. melt flow index experiment also to determining the amounts of molecular weight increasing in recycled samples was employed

کلمات کلیدی:

polyethylene terephthalate , solid state postcondensation , number-average molecular weight , end groups (concentration , melt flow index (MFI

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