

Depression of Major Transition Temperatures of Poly(ethylene terephthalate) Fibre by Some Model Compounds

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(Received March 24, 1986)

The effect of five flame retardant compounds on the depression of glass-transition temperature (T_g), cold crystallization temperature (T_c), and crystalline melting temperature (T_m) was examined by thermal analysis. The depression of T_g by four of the compounds was linear. The depression of T_g by the fifth compound gave a plateau-type minimum which could be due to 'super-saturation' theory or a modification of Kovacs' theory.⁵

INTRODUCTION

A study of the depression of the glass-rubber transition temperature (T_g) of polymers resulting in their plasticization, constitute a very important aspect of polymer structural studies, especially from polymer processing view point. Several workers¹⁻¹⁰ in this area,

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properties of three component network of IPNs. IPNs in present study have been studied in terms of dielectrical properties. The specific electrical conductivity (σ_0), electrical conductivity at room temperature (σ) and the activation energy (E) are reported in Table V. The dielectrical properties (ϵ' , ϵ'' and $\tan \delta$) Vs temperature at 10 KHz are shown in Figures 3-5. From these dielectrical properties, these IPNs behaved like perfect insulators and have properties bordering on those exhibited by semi-conductors.²⁵

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