

# The Effect of Interchange Reaction to the Polyester - Polyamide Blend System

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PET/nylon 6 blends were prepared in the presence of p-toluenesulfonic acid (TsOH) and analyzed by differential scanning calorimetry (DSC), scanning electron microscopy (SEM), and X-ray diffraction. As ester-amide interchange reaction proceeds,  $T_m$  of each component in the blends was decreased and crystallization temperature on cooling was increased. Especially  $T_m$  of nylon 6 component was decreased more rapidly than that of PET component with the increase of reaction time as shown in Fig.1. This finding is explained that hydrogen bonding interaction of nylon 6 is reduced as a result of interchange reaction. SEM observation and XD analysis showed that miscibility was increased with the progress of inter-chain reaction.

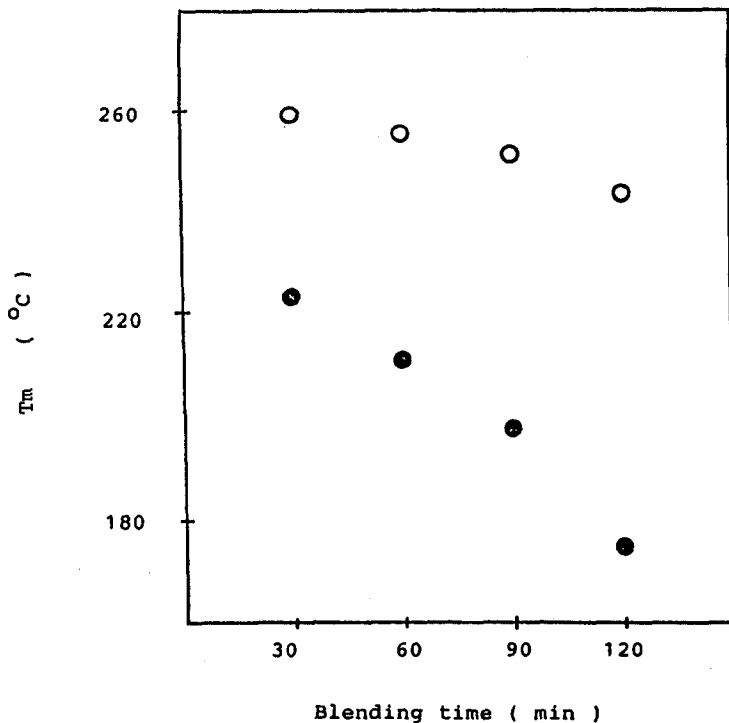


Fig.1.  $T_m$  of PET and nylon 6 components in PET/nylon 6 ( 50/50 ) blends prepared at different blending time ( open circle: PET, filled circle: nylon 6 ).