

Solid-State Polymerization of Poly(trimethylene terephthalate)

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Three kinds of low molecular weight poly(trimethylene terephthalate) (PTT) were prepared by melt-polymerization (MP) process of 1,3-propanediol (PDO) and terephthalic acid (TPA). These were synthesized to high molecular PTT by solid-state polymerization (SSP) as a function time and temperature. Nitrogen of atmospheric pressure was used as the sweep fluid to remove byproduct (PDO) in the SSP process. The thermal properties and molecular weight were measured by differential scanning calorimetry (DSC) and ubbelohde viscometer.