

# Spinning textile fibers from recycled PET polymers

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## **Abstract**

In this study two Poly (Ethylene Terephthalate) (PET) polymers obtained from mineral water bottle and a virgin PET polymer were characterized by viscosimetry, differential scanning calorimetry (DSC) and rheology. Virgin PET showed better rheological and viscosimetric properties compared to recycled PET polymers. In order to improve properties when reprocessed at high temperatures, recycled polymers were blended with the virgin one. Rheological and thermal properties of extruded recycled/virgin (PET-V/R) blends showed a good rheological and thermal compatibility and stability compared to extruded pure recycled polymers. Melt spun yarns obtained from recycled/virgin blends were investigated by static and dynamic mechanical analysis and gave interesting mechanical properties