

Effect of Pyrolysis on the Wettability Behaviour of Polyethylene Terephthalate on Petroleum Coke

In depth investigations has been carried out on thermoplastic polymers, polyethylene terephthalate (PET). The interaction between PET and PC substrate was studied to investigate the effect of oxygen-containing polymer on the polymer melt wetting properties. The effect of two main parameters, temperature ranging from 300°C to 400°C and time from 30 min to 60 min on the polymer properties and the effect of petroleum coke presence on the degradation process of polymer have been characterized. PET has showed high wettability and deep penetration of melt flow into petroleum coke substrate, which increased as time and temperature were increased.

Keywords: Petroleum Coke, Polyethylene Terephthalate, Pyrolysis, Temperature, Time, Wettability