

Study of Thermal Behavior of Silicon Carbide Reinforced Polyester Matrix Nanocomposite

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Abstract

SiC reinforced polyester nano-composites have been investigated to explore its thermal behavior and the possibilities of its performance improvement. This has been accomplished through addition of small amount of nano sized particles to the composite and by subjecting it to conduct of subsequent experimentations. Nano-composites find applications in the manufacture of special and process equipments. In this study, the composite is fabricated using a weight ratio of 30% for SiC which is reinforced with the remaining polymer matrix. Studies were done to understand the morphology and thermal behavior by conducting different tests and analysis such as thermal conductivity test, TGA and FE- SEM analysis.

Keywords: Distribution, Morphology, Thermogravimetry, Thermal Conductivity