

Study of mechanical and thermal properties of a polymeric composite with graphite nanoinclusions

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The effective mechanical properties of composites are affected by the distribution and formation of agglomerations of graphite nanoparticles in a polyester resin matrix. The samples were made varying the volume concentration of inclusions and their Maximum Tensile Strength, Young Modulus, Heat Capacity and morphology of agglomerations were measured. The morphology of agglomerations was analyzed by measuring their average area, fractal dimension and lacunarity from the micrographs. A predictive model of the effective physics properties based on the Rule-of-Mixtures

(ROM) was proposed, the parameters related to the complex microstructure were incorporated to ROM model. These modified models are a good description of the effect of inclusions on effective physics properties.

Speaker Biography

Juan Jose Reyes Salgado has completed his PhD at the age of 35 years from Benemerita Universidad Autonoma de Puebla, Puebla, Mexico. He is the professor of Universidad Popular Autonoma del Estado de Puebla, Puebla, Mexico. He has over 4 publications that have been cited over 6 times, and his publication H-index is 1.

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