

Evaluation of the Mechanical Properties of Nano TiO₂ and Clay Filler Filled Epoxy Composites

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Abstract : In this study, the mechanical properties of nano filled epoxy composites were evaluated. The matrix material is epoxy. nano fillers are Al₂O₃, TiO₂ and clay added in 2.5- 10 wt% by weight ratio. Test samples were prepared using an open mould type die. Mechanical tests were carried out. The tensile strength, elastic modulus, elongation at break and the hardness of the composite materials were obtained and evaluated. It was seen from the results that the filler content had a high influence on the level of the mechanical properties of the epoxy composites.

Keywords : nano, epoxy, composite, fillers, clay

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