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**Surface Modification of Kenaf Fiber Reinforced Epoxy based Composite**

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**Abstract**

In day today life, the awareness to the public along with the ease in the fabrication of polymers, has let to the frequent polymer useage. Few developing industries have started using the materials that are renewable. In the present work, the mechanical behavior of short un-treated and treated (KmNO4) kenaf fiber reinforced epoxy based composites was investigated. Fabrication of composite materials were carried out with volume percentage (10 %, 20 %, 30%) of treated and un treated kenaf fibers. The polymer used as matrix was epoxy resin. The composite was fabricated by using hand layup method. The various fiber loading was performed and their properties studied. The mechanical strength like tensile, flexural and impact of the composite was analysed. The effect of treatment had showed improvement in the composite properties. It was found that KmNO4 treatment and kenaf fiber loading has enhanced the synergetical effects on the composite. These chemically surface modified composites with natural fiber reinforcement can have a chief role in the development of structural component parts. These materials may be used for light weight applications, especially in automobile sector and structural components.

**Keywords:**

Epoxy, Kenaf fiber, KmNO4, Mechanical strength.

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