

## **Effect of Chemical Treatment on Mechanical Properties of KENAF Fiber Reinforced Unsaturated Polyester Composites**

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**Abstract :** In this study the treated and untreated kenaf fiber reinforced unsaturated polyester conventional composites were prepared. Hand lay-up technique was used with dump-bell shaped mold. The kenaf bast fiber was retted enzymatically, washed, dried and combed with a nylon brush. A portion of the kenaf fiber was mercerized and treated with benzoylchloride prior to composite fabrication. Untreated kenaf fiber was also used to prepare the composites to serve as control. The cured composites were subjected to various mechanical testes, such as hardness test, impact test and tensile strength test. The results obtained indicated an increase in all the parameters tested with the fiber treatment. This is because the lignin, hemi-celluloses, pectin and other impurities were removed during alkaline treatment (i.e mercerization). This shows that, the durability of the natural cellulosic fibers to different composite applications can be achieved via fiber treatments.

**Keywords :** composite, kenaf fibre, reinforce, retted

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