

## **A review of the flammability factors of kenaf and allied fibre reinforced polymer composites**

### **ABSTRACT**

Natural fibre is a well-known reinforcement fibre in polymer-matrix Composites (PMC) lately. Natural fibre has fast growing and abundance properties which make it available at very low cost. For kenaf fibre there is long lists of research projects which have been done regarding its behaviour, and properties and modification made to it. In this paper, fire flammability is the main concern for natural fibre reinforced polymer (NFRP) composites especially kenaf fibre. To estimate its flammability, a wide range of factors can be considered such as fibre content, type of matrices, pH conditions, treatment, and fire retardant (FR) filler's type. The most important criteria are the ignition time, rate of propagation, and fire behavior. thermogravimetric analysis (TGA), different scanning calorimetric (DSC), and dynamic mechanical analysis (DMA) are the three most famous methods used to investigate the fire behaviour of composites.

**Keyword:** Fire flammability; Natural fibre reinforced polymer (NFRP); Kenaf fibre