

## **A REVIEW ON THERMAL PROPERTIES OF GLASS FIBRE REINFORCED HYBRID POLYMER COMPOSITE MATERIALS**

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### **ABSTRACT**

Hybrid Polymer Composites offer new solutions to materials problems; they are currently the focus of research and development areas in all over world. In many common and advanced engineering applications, polymers and their hybrid composites are emerging as variable alternatives to metals and their alloys. Due to different thermal conditions and mechanical loading situations, hybrid composite materials need to be tested intensively. The hybrid composite materials are exposed under different low temperatures and high temperatures at environmental conditions will gives polymeric matrix hybrid composites are susceptible to degradation and material properties changes. Carbon fibre composites are widely used as structural reinforcement materials of buildings, replacing reinforcing bars or concrete which should have excellent mechanical and thermal properties. Hybrid polymer composites with different filler materials will give different thermal property values for variable temperature conditions. This paper presents review on thermal properties fibre reinforced hybrid composite materials and came to know that still an abundant scope to do research on study of thermal properties of composite materials by using Silicon, Aluminium oxides, Carbon and Graphite as a filler material of combination of glass fibre and natural fibres. This review study shows that the effect of thermal properties on fibre reinforced hybrid composite materials and hybridization can improve thermal properties.

**KEYWORDS**— Carbon, Coefficient of thermal expansion, Hybrid Composites, Fibres, Polymers, Silicon, Thermal Conductivity, Thermal Properties.