

## **STUDY ON SYNTHESIS AND MECHANICAL CHARACTERISATION OF BAGASSE REINFORCED POLYMER COMPOSITES**

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### **ABSTRACT**

*Natural fibre composites are expected to be in high demand in the coming years due to increased consumer awareness to reduce waste and to make environment friendly composites. Recently, there has been rapid growth in research and innovation in the natural fibre composite area. The greatest advantage of these materials compared to synthetic fibre composites is that these are environment friendly. This paper provides an insight on current trends in development and characterization of bagasse based composites. Numerous chemical treatment methods and processing techniques used to improve the thermal, ageing, mechanical and acoustic properties of sugarcane bagasse reinforced composites are summarized in this paper. This research aims at development of polymer matrix composites using sugarcane bagasse fibres and to study its mechanical behaviour under external loads. The test specimens are prepared according to the ASTM standards. Testing of Mechanical properties such as impact energy, tensile strength and flexural strength is undertaken and the results are presented.*

**KEYWORDS:** *Natural Fibre, Environment, Sugarcane Bagasse, Composite, Mechanical Property*

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