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## **Mechanical properties of natural fibre-reinforced composites**

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**Keywords:** Mechanical properties, natural fibre, composites

## 1. Introduction

Recently, interest in composite manufacturing has shifted towards the use of natural fibres as a reinforcement component because of potential environmental benefits. With the exception of just two examples (chopped silk and chicken feathers), the natural fibre reinforcement materials referred to in the current review are all of plant origin. The advantages of natural plant fibres, such as low abrasion, multi-functionality, low density, low cost, ready availability and relative ease of waste disposal, encourage their application in composite materials. To complement the fibre reinforcement component of composites, the following two groups of matrix materials are used:

- (1) Non-biodegradable matrix materials conventionally used for composite preparation
- (2) Fully biodegradable matrix materials used to allow the composite to be fully biodegradable and potentially more environment friendly

Almost all of the commonly available natural plant fibres that are cheap and abundant in nature are being used for reinforcement in combination with non-biodegradable matrix materials such as unsaturated polyester, epoxy resin, polyethylene and polypropylene (PP). Natural fibres have been successful in imparting to composite materials certain benefits

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