

## **An Empirical Approach for Prediction of Natural Fiber Reinforced Polypropylene Composite Properties**

**Ritu Gupta, Norrozila Sulaiman, Mohammed Dalour Hossain Beg, Arun Gupta**

**Abstract:** In this paper, empirical models are proposed using multiple non linear regressions technique to predict the influence on the Youngs modulus and the tensile strength of the natural fiber reinforced plastic composites (NFRPC). Maleic Anhydride grafted polypropylene (MAPP) has been a proven coupling agent (CA) used to improve the interfacial bonding between the fibers and the plastics material. It is important to include the factor of coupling agent, when making predictions the properties of the composites through the models. For the development of the model, data was collected from various research journals presented in literature. Non linear regression analysis was performed to obtain the empirical model using polymath scientific software. The results were found to be within the acceptable range.

**Keywords:** Coupling Agent, Natural Fiber Reinforced Plastic Composites, Regression Model

doi: [10.4028/www.scientific.net/AMM.534.69](https://doi.org/10.4028/www.scientific.net/AMM.534.69)