

# Influence of Glass Fiber Content on the Flexural Properties of Polyamide 6-Polypropylene Blend Composites

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## **Abstract:**

Recently, polymer blend composites are receiving significant attention to fulfill the growing demand from automotive industries because of their improved properties as compared to that of pure polymer blends. In this research work, considering 0%, 3%, 6% and 9% glass fiber content, four different compositions of polyamide 6 (PA6)-polypropylene (PP)-glass fiber composites such as, 80%PA6+20%PP, 77%PA6+20%PP+3%GF, 74%PA6+20%PP+6%GF and 71%PA6+20%PP+9%GF were prepared using an injection molding machine. Different process parameters were taken into consideration in order to produce dog bone shaped specimens free of defects. All flexural tests were performed according to ASTM standard. Results showed that flexural yield strength steadily improves as fiber content increases. Test data showed that flexural stiffness or modulus is lowest for pure blend and it gradually improves with addition in glass fiber. Flexural strength is lowest for pure blend and it gradually develops with increase in fiber content. On the other hand, it was observed that flexural strain is hardly impacted by fiber content.

**Keywords:** Flexural Properties; Polyamide; Polypropylene; Glass Fiber.

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