

**PROPERTIES OF WOOD PLASTIC COMPOSITE USING MAHANG GAJAH  
(*Macaranga gigantea*) WITH DIFFERENT FILLER LOADING**

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## ABSTRACT

### **PROPERTIES OF WOOD PLASTIC COMPOSITE USING MAHANG GAJAH (*Macaranga gigantea*) WITH DIFFERENT FILLER LOADING**

The properties of wood plastic composite using Mahang Gajah (*Macaranga gigantea*) as filler mixed with polypropylene has been carried out. The objective of this study was to evaluate the effect of three different mix lines of the filler loading with polypropylene on mechanical and physical properties of WPC. The amounts of filler loading are 15, 25 and 40%. Two types of mechanical properties, flexural and tensile strength and 2 physical tests WA and TS are carried out. The results show that MOE and Tmoe are increasing according to the increase in wood filler. For MOR and tensile strength, the results decrease when the wood filler is increased. For elongation, increasing the wood filler decreases the elongation. WA and TS decrease according to the increase in wood filler. The conclusion is that Mahang Gajah (*Macaranga gigantea*) is suitable for use as wood filler for WPC.