

PROPERTIES OF PARTICLEBOARD FROM *Acacia mangium* spp.

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ABSTRACT

PROPERTIES OF PARTICLEBOARD FROM *Acacia mangium* WOOD SPECIES

In this project study the influent of resin content on mechanical and physical properties of single layer particleboard is determined. The raw material is from *Acacia* wood species are been used to manufacture the particleboard. The material were being used for alternatives raw material for particleboard manufacture. The resin content are been used as variable in this project study which mean the percent ratio is 8%, 10% and 12% while the selected of the suitable board were treatment with wax. The amount of wax content is 1% based on resin content. This project study conducted for determined board that using in furniture as supply raw material. The furniture making is related to industry for reduce the cost in manufacture particleboard. Other parameter is resin urea-formaldehyde (UF), density of board (700 kg/m^3) and press temperature (165°C) was same. The board were tested by specific testing such mechanical properties (MOR, MOE and IB) and physical properties (TS) was refer to standard BS EN 312:2003. Overall the result were showed the board 10% is fulfill the requirement of BS EN 312:2003. The strength of board increase by increase the ratio of resin content. The physical of board that wasn't pass to standard has being treatment with wax 1% to better the dimensional stability. Overall the *Acaia* woods should be considered as alternative of raw material for particleboard in making furniture product.