

**UNIVERSITI TEKNOLOGI MARA**

**NAIL WITHDRAWAL PROPERTIES ON  
PARTICLEBOARD FROM ACACIA (*Acacia mangium*)**

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## **ABSTRACT**

Mechanical fasteners and connectors are available for use in attaching one structural unit to another. Nails are generally used when loads are not too heavy. In panel products such as particleboard, nail can be used to attach the components. In this study, small wood particles with size 1.0 mm made from *acacia mangium* will be bonded together with Urea-formaldehyde (UF) to making particleboards with different density which is 500 kg/m<sup>3</sup>, 600 kg/m<sup>3</sup>, and 700 kg/m<sup>3</sup>. The boards are used to test the nail withdrawal properties which are knocks down by hammer at the center of the particleboards surface. Increasing in density will affected the nail withdrawal properties on the particleboards.

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