PROPERTIES OF PARTICLEBOARD MADE FROM ACACIA SPECIES: EFFECTS OF RESIN CONTENT AND HOT PRESS TEMPERATURE

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ABSTRACT

PARTICLEBOARD PROPERTIES OF ACACIA: EFFECTS OF RESIN CONTENT AND HOT PRESS TEMPERATURE.

The Acacia were cut down in Universiti Teknologi Mara (UiTM). The Acacia particleboards were manufactured in UiTM wood workshop. The properties of Acacia particleboard were determined. The effect of varying resin content (7%, 9% and 11%) and hot press temperature (145^0C, 155^0C and 165^0C) were determined. The effect of hot press temperature on mechanical properties shows there is 22% of ascension of mechanical properties in MOR from 145^0C to 165^0C. The mechanical properties in MOE increase 9% from 145^0C to 165^0C. While the mechanical properties of particleboard increase 36% in IB from 145^0C to 165^0C. According to effect of resin content towards the mechanical properties of particleboard, there was an increment of strength as much as 22% in MOR, 11% in MOE and 57% in IB from 7% to 11% resin content. The effect of hot press temperature towards the physical properties of the particleboard shows an improvement of 2% in WA from 145^0C to 165^0C and 36% improvement in TS from 145^0C to 165^0C. While the effect of resin content on physical properties shows an improvement of 25% of WA and 147% in TS from 7% to 11% resin content.