PROPERTIES OF ORIENTED STRAND BOARD (OSB) FROM MIX ACACIA MANGIUM (ACACIA) AND ENDOSPERMUM DIADENUM (SESENDUK) AT 7% RESIN CONTENT WITH DENSITY OF 600Kg/m³

By

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ABSTRACT

Properties of Oriented Strand Board (OSB) from mix *Acacia mangium* (Acacia) and *Endospermum diadenum* (Sesenduk) at 7% Resin Content with Density of 600 kg/m³.

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Oriented strand board (OSB) is a one of wood based panel was produced. OSB was used as wood composite to replace the plywood for the next coming years. The objective of this study is to determine the physical and mechanical properties of OSB made from mix *A. mangium* and *E. diadenum*. It is also to know the suitable mix species in manufacture of OSB. The specific objectives of this study are to determine the Modulus of Elasticity (MOE), to determine the Modulus of Rupture (MOR) and to determine the Thickness Swelling, Internal Bonding and Water Absorption. All of these properties will test and this result will compare with European Standard (EN310). As a conclusion to this study, specimens at 7% resin content with density of 600kg/m³ passed minimum requirement EN310 standard in all testing. According to EN310 standard, MOE, MOR and Internal Bond must more than 3500 MPa and 20 MPa and 0.32 MPa. For this study, average values are 6316 MPa, 32 MPa and 2.44 MPa respectively. Thickness swelling value in standard is less than 15 % and in testing result is 12%. So the mechanical and physical property for OSB from mix Acacia and Sesenduk shows good strength properties.