

**MECHANICAL PROPERTIES OF FINGER JOINT FROM
Acacia mangium spp BY ADHESIVE TYPES AND TREE
PORTION**

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ABSTRACT

MECHANICAL PROPERTIES OF FINGER JOINT FROM *Acacia mangium spp* BY ADHESIVE TYPES AND TREE PORTION

This study was carried out to determine the properties of finger jointed *Acacia mangium spp* with variables of tree portion top, middle and bottom and also adhesive types namely PVAc and Epoxy. The physical properties test is to determine the density and moisture content of *Acacia mangium spp* that was conducted accordance to TAPPI standard T258 OM-94 (1996). The mechanical properties test is to determine the Modulus of Rupture (MOR) and Modulus of elasticity (MOE) of finger jointed *Acacia mangium spp*. The test was conducted in accordance to the standard testing method for finger joint, i.e. European Standard (EN 408:2003 Timber Structures, Structural Timber and Glued Laminated Timber, Determination of Some Physical and Mechanical Properties). For MOR, the sample from top and middle portions shows the highest reading 40.9587 MPa and 42.2683 MPa. The bottom portion shows the lowest 37.664 MPa. For MOE, both sample from top portion and middle portion are also the highest 11683.4717 MPa and 11688.267 MPa and the lowest is bottom portion 11565.1983 MPa. For adhesives, the sample bonded with Epoxy gives the higher value for MOR and also MOE, 49.9629 MPa and 11932.97 MPa.

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