

**PHYSICAL AND MECHANICAL PROPERTIES OF
PARTICLEBOARD MADE FROM SELECTED FAST-
GROWING SPECIES USING DIFFERENT RESIN
CONTENT: A REVIEW**

HANNANI BINTI ABD HARIS

**BACHELOR OF SCIENCE (HONS.) FURNITURE
TECHNOLOGY
FACULTY OF APPLIED SCIENCES
UNIVERSITI TEKNOLOGI MARA**

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ABSTRACT

PHYSICAL AND MECHANICAL PROPERTIES OF PARTICLEBOARD MADE FROM SELECTED FAST-GROWING SPECIES USING DIFFERENT RESIN CONTENT: A REVIEW

The wood-based industry is dealing with a scarcity of solid timber resources. One of the causes for the shortage of solid wood as a raw material for wood products is the loss of forests. Not just that, the high demand of Rubberwood as the main raw materials for particleboard leads to the reduction of supply. As a result, particleboard manufacturing technology has aided in the development of a solid wood substitute. Due to its availability and rapid growth rates, fast-growing species is one of the potential raw materials in Malaysia that has been identified to be used in particleboard production. Based on the findings from previous researchers, this paper presents a review on the properties of particleboard made from fast-growing species such as *Endospermum diadenum*, *Neolamarckia cadamba* and *Leucaena leucocephala*. The effects of resin content were studied using different resin contents for the properties of mechanical (8%, 10% and 12%) and physical (10%, 12% and 14%). The data that has been analysed showed that the increasing of the resin content significantly enhanced the mechanical properties of the particleboard. As the resin concentration was increased, the value of thickness swelling and water absorption decreased, indicating more stability of the board.