

Selected properties of hybrid particleboard composite made from oil palm empty fruit bunch (EFB) and Merpauh (IRVINGLA MALAYANAN OLIVE) particles bonded with Melamine urea formaldehyde resin

ABSTRACT

The Merpauh (*Irvingia malayana* olive) sawdust was mixed with empty fruit bunch (EFB) of oil palm tree, aimed to improve the homogeneous EFB particleboard. The EFB and Merpauh fibres with diameter of less than 1 mm and more than 1 mm were prepared and they were mixed with ratios of 40:60, 60:40, 80:20 and 100:0. The particleboard with a target density of 750 Kg/m³ and sized of 340mm x 340mm x 12mm were prepared with 12% melamine urea formaldehyde (MUF) and 3 % hardener. The physical and mechanical properties of particleboard were tested in according to JIS 5908: 2003. The results showed that all the physical and mechanical properties of either mixture (EFB/wood) or homogenous EFB particleboards met a minimum requirement of JIS 5908: 2003 standard, except for thickness swelling.