

**PROPERTIES OF WOOD PLASTIC COMPOSITE USING OIL  
PALM EMPTY FRUIT BUNCH WITH DIFFERENT PARTICLE  
SIZE**

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## ABSTRACT

### PROPERTIES OF WOOD-PLASTIC COMPOSITE USING OIL PALM EMPTY FRUIT BUNCH WITH DIFFERENT PARTICLE SIZE

Wood- plastic Composite (WPC) was produced with filler loading at 15% of Oil Palm (*Elaeis guineensis*) empty fruit bunch (EFB) particles, mixed with Polypropylene (PP). The effect of particle sizes at 75 $\mu$ , 150 $\mu$  and 250 $\mu$  was studied. The objectives of this study is to evaluate the effect of three different particle size of Empty Fruit Bunch mix with Poplypropylene, The mechanical and physical testing was carried out according to American Society of Testing Materials (ASTM). The mechanical properties such Modulus of Elasticity (MOE) and Tensile (TMOR) increased as the particle size increases. The physical properties, Thickness Swelling (TS) and Water Absorption (WA) increased at increase in particle size. EFB particles can be used as filler to produce WPC.