

**PROPERTIES OF WEATHERED OIL PALM TRUNK PLASTIC
COMPOSITE IN RELATIONSHIP TO FILLER LOADING, PARTICLE
SIZE, FILLER LOADING AND MAPP ADDITION**

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ABSTRACT

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BY

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The research for weathered Oil Palm Trunk (OPT) has been done. The test for bending, tensile and water absorption have done for make sure the OPT is more comfortable in making wood plastic composite. The making of thermoplastic composite using OPT is followed from 10%, 30% and 50% of filler loading and 150 μm , 250 μm and 425 μm of particle size with Maleic Anhydride-Grafted Polypropylene (MAPP) or without MAPP. The result of the bending modulus rupture (BMOR) and tensile modulus rupture (TMOR) show that the higher value. It also show that BMOR will decrease when increase the filler loading, so filler loading with the higher value is more strength because use more plastic polypropylene (PP) than filler, so it is suitable to making the wood plastic composite (WPC). For the testing of BMOR and TMOR with 3% of MAPP is more strength compared without MAPP. For the overall result physical properties effect on water absorption (WA) of filler loading with higher percentage 50%, particle size 425 μm and with MAPP 3% is the best result and the higher value, so it is the suitable to make the WPC product.