PROPERTIES OF THERMOPLASTIC COMPOSITE FROM OIL PALM

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ABSTRACT

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Oil palm (*Elaeis queenisis Jacq*) particles was assess as filler in the manufacture of polypropylene composite. The oil palm particles was separated from the fiber strand using a vibratory screener and dried in an oven for 48 hours. Particles loading of 10%, 30% and 50% of polypropylene by weight was used in the study. Test samples were then produced using a chrome-plated mould for bending, tensile and water absorption. Results of the bending and tensile, showed that with higher filler loading the bending, tensile strength and elongation at break decreases while modulus of elasticity increases. The water absorption was shown to decrease with increase in filler loading. As a conclusion, particles of oil palm was found to be a suitable filler and is recommended to be use in the manufacture of thermoplastic products that does not require high strength properties.