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## Effect of oil palm EFB-biochar on properties of PP/EVA composites (Article)

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### Abstract


In recent years, the race for producing biodegradable products has increased tremendously. Different approaches have been attempted to utilise biomass as filler for the production of composites. In this work, biochar from oil palm empty fruit bunch fibre (EFB) was used as reinforcing filler. The biochar was produced by pyrolysis of EFB at 700°C under nitrogen environment. Later, the biochar was added in different ratios up to 40 wt% in PP/EVA/MAPP blend using internal mixer Brabender PL200 twin-screw extruder. The composition ratio of EVA and MAPP was kept constant to 20 wt% and 5wt% respectively. Effects of biochar on the mechanical and thermal properties of the composite were investigated. Results reveal that the addition of 30 wt% biochar enhances thermal properties whilst having no detrimental effect on any mechanical properties. Studies on the morphological properties have shown good compatibility between biochar and polymer matrix at moderate addition of MAPP. © School of Engineering, Taylor's University.

### Author keywords

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