

Accepted Manuscript

Effect of benzoyl treatment on flexural and compressive properties of sugar palm/glass fibres/epoxy hybrid composites

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PII: S0142-9418(18)30780-3

DOI: [10.1016/j.polymertesting.2018.09.017](https://doi.org/10.1016/j.polymertesting.2018.09.017)

Reference: POTE 5615

To appear in: *Polymer Testing*

Received Date: 15 May 2018

Revised Date: 14 August 2018

Accepted Date: 12 September 2018

Please cite this article as: S.N.A. Safri, M.T.H. Sultan, N. Saba, M. Jawaid, Effect of benzoyl treatment on flexural and compressive properties of sugar palm/glass fibres/epoxy hybrid composites, *Polymer Testing* (2018), doi: <https://doi.org/10.1016/j.polymertesting.2018.09.017>.

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1 **Effect of Benzoyl Treatment on Flexural and Compressive Properties of Sugar**
2 **Palm/Glass Fibres/Epoxy Hybrid Composites**

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11 **Abstract**

12 Present study deals the benzoylation of sugar palm fibres (SPF) and its hybridization in glass
13 fibres (GF) reinforced epoxy composites through a traditional hand lay-up technique. The
14 effect of benzoylation on flexural and compressive properties at various fibres-fibres
15 (SPFGF) ratios, that is, 100:0, 70:30, 50:50, 30:70 and 0:100 of SPF/GF/epoxy hybrid
16 composites were evaluated and compared. The flexural and compressive properties of the
17 composites were investigated according to ASTM D-790-10 (2010) and ASTM D695-15
18 (2015) standards. Result analysis revealed that benzoylation of the SPF considerably
19 improved the flexural and compressive properties of the SPF/GF/epoxy hybrid composites.
20 However the best flexural and compressive properties were observed for treated
21 SPF/GF/epoxy hybrid composites with formulation of 30SPF:70GF also been justified by the
22 SEM.

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