## Accepted Manuscript

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

Syafiqah N.A. Safri, Mohamed T.H. Sultan, Naheed Saba, Mohammad Jawaid

PII: S0142-9418(18)30780-3

DOI: 10.1016/j.polymertesting.2018.09.017

Reference: POTE 5615

To appear in: Polymer Testing

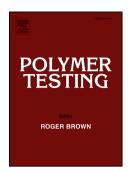
Received Date: 15 May 2018

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.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



## ACCEPTED MANUSCRIPT

1	Effect of Benzoyl Treatment on Flexural and Compressive Properties of Sugar
2	Palm/Glass Fibres/Epoxy Hybrid Composites
3	Syafiqah N.A. Safri <sup>1</sup> , Mohamed T.H. Sultan <sup>1,2,3*</sup> , Naheed Saba <sup>2</sup> , Mohammad Jawaid <sup>2</sup>
4	<sup>1</sup> Aerospace Manufacturing Research Centre (AMRC), Faculty of Engineering, Universiti
5	Putra Malaysia, 43400 Serdang, Selangor, Malaysia
6	<sup>2</sup> Laboratory of Biocomposite Technology, Institute of Tropical Forestry and Forest Products
7	(INTROP), Universiti Putra Malaysia, 43400 Serdang, Selangor, Malaysia
8	<sup>3</sup> Department of Aerospace Engineering, Faculty of Engineering, Universiti Putra Malaysia,
9	43400 Serdang, Selangor, Malaysia
10	*Corresponding author E-mail: thariq@upm.edu.my
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	(SPF/GF) 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.

Download English Version:

## https://daneshyari.com/en/article/11032209

Download Persian Version:

https://daneshyari.com/article/11032209

Daneshyari.com