Submitted: 2017-07-18 Accepted: 2017-07-26 Online: 2017-11-16

Crushing Response of Green Square Honeycomb Structure from Sugar Palm & PLA

Z. Ansari^{1,a}, M.R.M. Rejab^{1,b}, D. Bachtiar^{1,c} and J. Siregar^{1,d}

¹Structural Materials & Degradation Focus Group, Faculty of Mechanical Engineering, Universiti Malaysia Pahang, 26600 Pekan, Pahang, Malaysia. Phone: +6094246255; Fax: +6094246222

^aEmail: zahidah.engineer@gmail.com, ^bEmail: ruzaimi@ump.edu.my, ^cEmail: dandi@ump.edu.my, ^dEmail: januar@ump.edu.my

Keywords: Compression properties, polylactic acid (PLA), sugar palm fibre, tensile properties, Young's modulus

Abstract. Experiment investigation were conducted on square honeycomb structure made out of sugar palm reinforced polylactic acid (PLA). This paper investigate the compression and tensile properties of new and recycled sugar palm/PLA composite. Short fiber were obtain by crushing and then mix with PLA before being hot pressed at 180°C. The 3mm plate were then developed into sandwich square honeycomb structure. The result show small decrement in strength pattern.