## Effects of Kenaf and Rice Husk on Water Absorption and Flexural Properties of Kenaf/CaCO3/HDPE and Rice Husk/CaCO3/HDPE Hybrid Composites

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**Abstract :** Rice husk and kenaf filled with calcium carbonate (CaCO3) and high density polyethylene (HDPE) composite were prepared separately using twin-screw extruder at 50rpm. Different filler loading up to 30 parts of rice husk particulate and kenaf fiber were mixed with the fixed 30% amount of CaCO3 mineral filler to produce rice husk/CaCO3/HDPE and kenaf/CaCO3/HDPE hybrid composites. In this study, the effects of natural fiber for both rice husk and kenaf in CaCO3/HDPE composite on physical and mechanical properties were investigated. The property analyses showed that water absorption increased with the presence of kenaf and rice husk fillers. Natural fibers in composite significantly influence water absorption properties due to natural characters of fibers which contain cellulose, hemicellulose and lignin structures. The result showed that 10% of additional natural fibers into hybrid composite had caused decreased flexural strength, however additional of high natural fiber (>10%) filler loading has proved to increase its flexural strength.

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