Environmental Friendly Thermoplastic Composite Laminates reinforced with Jute Fabric

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**ABSTRACT**

A commercial jute fabric was used as the reinforcement of two thermoplastic matrices: polypropylene (PP) and poly(lactic acid) (PLA) having glass transition temperatures equal to 8°C and 60 °C respectively. The latter were evaluated by previous dynamic-mechanical tests. Plates prepared by conventional film stacking and compression molding procedures have been systematically subjected to low-velocity impact tests at room temperature. The comparison between the two kind of samples, reported not only in terms of load-displacement and energy-time curves but also in light of morphological observations, is discussed taking into account, among others, the rubbery behavior of PP based samples and the glassy nature shown by the fully-biodegradable system PLA/jute at the considered test temperature.