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COMPARATIVE CHARPY IMPACT TESTS BETWEEN EPOXY COMPOSITE REINFORCED WITH CURAUA AND EPOXY COMPOSITE REINFORCED WITH FIBERGLASS

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Polymer matrix composites have been applied in components such as helmets,bumpers and shielding for which toughness is a major requirement. Natural fiber presents interfacial characteristics with polymeric matrices that favor a high impact energy absorption by the composite structure. The objective of this work was then to assess the charpy impact resistance of polymeric composites reinforced with 0 and 30% in volume, of a promising high strength natural fiber from the Amazon region known as curaua. The results showed a remarkable increase in the notch toughness with the amount of incorporated curaua fibers. This can be attributed to apreferential debonding of the fiber/matrix interface, which contributes to an elevated absorbed energy.