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Development and Analysis of Waste Human Hair Fiber Reinforced Composite

Authors : Tesfaye Worku

Abstract : Human hair, chicken feathers, and hairs of other birds and animals are commonly described as waste products, and the currently available disposal methods, such as burying and burning these waste products, are contributing to environmental pollution. However, those waste products are used to develop fiber-reinforced textile composite material. In this research work, the composite was developed using human hair fiber and analysis of the mechanical and physical properties of the developed composite sample. A composite sample was made with different ratios of human hair and unsaturated polyester resin, and an analysis of the mechanical and physical properties of the developed composite sample was tested according to standards. The fabricated human hair fibers reinforced polymer matrix composite sample has given encouraging results in terms of high strength and rigidity for lightweight house ceiling board material.

Keywords : composite, human hair fiber, matrix, unsaturated polyester
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