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Impact Behaviour of Hybrid Composites for Structural Applications: A Review

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Recently published research indicates that natural fibre based polymer composites have limited applications in advanced structural systems due to their low impact performance. However, natural fibres have great potential for reducing the product weight, lowering material cost, and renewability. Hybrid composites made from a combination of natural/synthetic fibres, natural/natural fibres, or synthetic/synthetic fibres are also receiving attention from both researchers and the industry for structural applications owing to the tailored mechanical and impact properties of these materials. The hybridisation process is one of the paramount and more efficient ways to strengthen and improve the performance of composite materials. This review paper examines the impact properties of hybrid composites manufactured with the aim of improving their structural characteristics, and in particular, is focused on the impact resistance and penetration behaviour of hybrid composites reinforced with natural and synthetic fibres as well as their suitability for modern structural applications.

*Keywords**:** A. hybrid, A. laminates, A. polymer-matrix composites (PMCs), B. impact behaviour*

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