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## Hybrid Bio Composites from Agricultural Residues: Mechanical and Thickness Swelling Behavior

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**Abstract:** This research explores the effective utilization of agri-residue in polymer composites. A Hybrid polymer composite was prepared by reinforcing coir pith, rice husk and groundnut shell in an epoxy matrix system. The particle content were varied in three different ranges [7.5, 15, 22.5 and 30 wt %] and their effect on tensile and flexural strength of the composites were analyzed. The dimensional stability of the composites was also studied as per ASTM D570 standard. The fractured behavior of the composites was examined using scanning electron microscope [SEM]. The investigation evidenced the noteworthy role played by the hybrid reinforcements in improving the mechanical and dimensional stability of the composites.

**Keywords:** Rice husk, coir pith, groundnut shell, epoxy and mechanical properties.

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