

## **DEVELOPMENT OF SOIL BASED COMPOSITE WALL PANEL USING LOCALLY AVAILABLE LATERITE SOILS**

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This research focus on developing laterite soil-based composite wall panels by using soil cement mixture, reinforced with cellulose fibers from pretreated cornhusk. In this, effect of various laterite soils and cement proportions of the mixture on the properties of wall panels like flexural strength, water absorption and thermal conductivity were determined. It has been observed high  $\text{Al}_2\text{O}_3+\text{Fe}_2\text{O}_3$  content, good particle size distribution, lower clay content of soil shows good performance of wall panel properties. Further, lowering the cement content of the mixture reduces the wall panel performance.

**Keywords:** Lateritic soils; Wall panels; Pre-treatment; Composite mixture; Fibers