

# A Systematic Review of Properties of High-Strength Concrete using Rice Husk ash as a Replacement

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**Abstract:** *The investigation aims to analyse potential methods of augmenting high-strength concrete's (HSC) quality by incorporating Rice Husk Ash (RHA). Residue from incinerated rice husks, commonly known as RHA, has been applied to concrete to enhance material durability and strength since ancient times. Research conducted on high-strength concrete (HSC) sought to investigate how RHA affects its endurance and fortitude. The study featured a composition range from 0.3% - 1.2% RHA content density in HSC blends. It was discovered that adding RHA improved both compressive force resistance and splitting tensile control potency within these mixtures by an average increase of 6.2%, whereas abounding with up to or exceeding 14.7%. Furthermore, water permeation capabilities were bolstered alongside chloride infiltration defence attributes among this kindred variation; suggesting it could function reliably as an admixture suitable for improving structural robustness when added at significant ratios into High-Strength Concrete compositions- thereby proving itself effective overall towards achieving optimal enhancements across multiple facets affecting longevity & sturdiness alike over time through rigorous testing protocols established during our analysis period.*

**Keywords:** Rice husk ash, high-strength concrete

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