

## ABSTRACT

### *The Effect of Steel Fiber Mixture on Flexural Tensile Strength of Geopolymer Concrete*

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*This study aims to analyze the effect of steel fiber mixture on the flexural tensile strength, workability (slump test), and density of geopolymers. Steel fibers were added to the geopolymers with varying percentages, and tests were conducted to measure the flexural tensile strength, workability, and density of the geopolymers. The results showed that the addition of steel fibers significantly increased the flexural tensile strength of the geopolymers. Furthermore, the addition of steel fibers also affected the workability of the geopolymers, where higher percentages of steel fibers tended to decrease workability. However, the changes in density were not significantly affected by the addition of steel fibers. These findings provide a better understanding of the effect of steel fiber mixtures on the properties of geopolymers and can serve as a guide in the development of steel fiber-reinforced geopolymers. This study contributes to the development of environmentally friendly construction materials with improved mechanical performance.*

*Keywords: geopolymers, steel fibers, flexural tensile strength, workability, density of geopolymers.*