

## Analyzing Tensile Strength in Different Composites at High Temperatures: Insights from 761 Tests

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**Abstract :** In this critical review, the topic of how composites maintain their tensile strength when exposed to elevated temperatures will be studied. A comprehensive database of 761 tests have been analyzed and closely examined to study the various factors that affect the strength retention. Conclusions are drawn from the collective research efforts of numerous scholars who have investigated this subject. Through the analysis of these tests, the relationships between the tensile strength retention and various effective factors are investigated. This review is meant to be a practical resource for researchers and engineers. It provides valuable information that can guide the development of composites tailored for high-temperature applications. By offering a deeper understanding of how composites behave in extreme heat, the paper contributes to the advancement of materials science and engineering.

**Keywords :** tensile tests, high temperatures, FRP composites, mechanical performance

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