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# Effect of different reinforcement materials on the formation of secondary plateaus and friction properties in friction materials for automobiles

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## Abstract

The effect of combining various reinforcement materials, such as potassium titanate, Cu fiber, and steel fiber on the frictional and morphological properties of brake pads was investigated. The pad types were denoted as PT (with only potassium titanate), PC (with potassium titanate and Cu fiber), and PF (with potassium titanate and steel fiber). The PC pad exhibited the most stable coefficient of friction during repetitive braking across all the test temperatures. The PF pad exhibited a stable coefficient of friction below 250 °C, with unstable behavior at 300 °C. The surfaces of all three pads contained contact plateaus. The PC and PF pads showed primary and secondary contact plateaus, while the PT pad showed only primary contact plateaus.

**Keywords:** Reinforcement; Friction; Potassium titanate; Metal fiber

## 1. Introduction

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