

# **Strength, Deflection and Watertightness of Steel Fiber Reinforced Concrete Modified by Silica Fume**

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## **ABSTRACT**

This research concerns concrete composites based on fine aggregate modified by up to 25% of silica fume and reinforced by up to 2% (by volume) of steel fiber. Concrete was modified by replacing cement by silica fume and adding steel fibers. All examinations were carried out after 120 days of curing. The received results of the research on ultimate compressive strength, flexural strength and watertightness are presented on charts. The author noted a considerable improvement in compression strength and watertightness of the examined concrete mixes. The subject of the analysis of the research results was to define the relation between flexural strength of the examined concrete composites and effective spacing.

**Key words:** Concrete, fine aggregate, silica fume, steel fiber, watertightness