

## Compressive and Torsional Strength of Self-Compacting Concrete

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**Abstract :** The goal of this study was to investigate the effects of silica fume and super plasticizer dosages on compressive and torsional properties of SCC. This work concentrated on concrete mixes having water/binder ratios of 0.45 and 0.35, which contained constant total binder contents of 400 kg/m<sup>3</sup> and 500 kg/m<sup>3</sup>, respectively. The percentages of silica fume that replaced cement were 0 % and 10 %. The super plasticizer dosages utilized in the mixtures were 0.4%, 0.8%, 1.2 % and 1.6 % of the weight of cement. Prism dimensions used in this test were 10 × 10 × 40 cm<sup>3</sup>. The results of this research indicated that torsional strength of SCC prisms can be calculated using the equations presented in Canadian and American concrete building codes.

**Keywords :** self-compacting concrete, rectangular prism, torsional strength

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