

Partial Replacement of Cement by Nano-Silica in Concrete Mix: A Comprehensive Study

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Abstract: *This research paper investigates the effects of partial replacement of cement with Nano-silica in concrete mixtures. The study aims to explore the potential benefits of incorporating Nano-silica as a supplementary cementitious material, focusing on its influence on the mechanical, durability, and microstructural properties of concrete. Experimental investigations were conducted on various concrete mixtures with different levels of cement replacement using Nano-silica. The results obtained provide valuable insights into the feasibility and effectiveness of utilizing Nano-silica as a sustainable solution in concrete production.*

Keywords: Nano-silica, cement replacement, concrete mix, mechanical properties, durability, microstructure.

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