

# **Understanding the relationship between the segregation of concrete and coarse aggregate density and size**

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## **Abstract**

Segregation of aggregate, which ultimately influences the strength and durability of concrete, is one of the major problems during construction. Two factors and their effects on the segregation of fresh concrete under vibration were studied. Based on the statistical analysis of the experimental results, it was concluded that the observed rate of segregation is an intrinsic property of concrete and is independent of the vibration time applied. The segregation tendency of a concrete mixture is mainly explained by the interaction between the specific surface of coarse aggregate and the difference in density between the aggregate and mortar phase rather than by each individual factor independently.