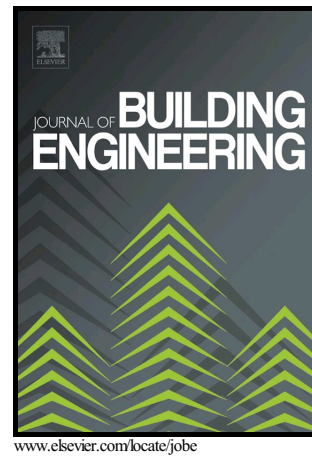


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Assessing the performance of molarity and alkaline activator ratio on engineering properties of self-compacting alkaline activated concrete at ambient temperature.

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Abstract:

Geopolymer technology concentrates producing eco-friendly binder which can be a permanent solution for replacement of traditional hydraulic binders. The performance benefits and operational energy savings can be accomplished by use of self-compacting alkaline activated concrete commonly known as Self-Compacting Geopolymer Concrete (SCGC). The current study access experimental investigation on influence of different concentration of sodium hydroxide solution (2M, 4M, 6M, 8M, 10M and 12M) and alkaline activator ratio (2, 2.5, 3, 3.5 and 4) fresh properties, compressive strength and durability properties. The industrial by-products such as fly ash and Ground Granulated Blast furnace Slag (GGBS) are effectively used in producing SCGC. In order to avoid heat curing treatment and facilitate ambient curing a part fly ash of was replaced by GGBS. In order to improve fresh properties and to control rapid setting 25% low calcium fly ash and 75% GGBS were

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