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Rubber aggregate-cement matrix bond enhancement: Microstructural analysis, effect on transfer properties and on mechanical behaviours of the composite

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Abstract: Limited strain capacity and low tensile strength of cement-based materials make them brittle and sensitive to cracking, behaviour that limits durability of cement-based applications. Rubber aggregates (RA) incorporation appeared to be a suitable solution to improve the strain capacity and to limit the propensity of such materials for cracking. However, bond defect between RA and cementitious matrix is well-known and detrimental to mechanical and transfer properties of rubberized cement-based composites. This paper is dedicated to the enhancement of rubber-cement matrix interface and then investigates effect of this bond on transfer properties

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