

Recycled Waste Glass Powder as a Partial Cement Replacement in Polymer-Modified Mortars

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Abstract : The aim of this study was to observe the behavior of polymer-modified cement mortars with regard to the use of pozzolanic admixture. Polymer-modified mortars (PMMs) containing various types of waste glass (waste packing glass and fluorescent tube glass) were produced always with 20% of cement substituted with a pozzolanic-active material. Ethylene/vinyl acetate copolymer (EVA) was used for polymeric modification. The findings confirm the possibility of using the waste glass examined herein as a partial substitute for cement in the production of PMM, which contributes to the preservation of non-renewable raw material resources and to the efficiency of waste glass material reuse.

Keywords : recycled waste glass, polymer-modified mortars, pozzolanic admixture, ethylene/vinyl acetate copolymer

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