

Valorization of Industrial Wastes on Hybrid Low Embodied Carbon Cement Based Mortars

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Abstract : Waste reuse is crucial in a context of circular economy and zero waste sustainable needs. Some wastes deserve further studies by the scientific community not only because they are generated in high amount but also because they have a low reuse rate. This paper reports results of 32 hybrid cement mortars based on fly ash and waste glass. They allow to explore the influence of mix design on the cost and on the embodied carbon of the hybrid cement mortars. The embodied carbon data for all constituents were taken from the database Ecoinvent. This study led to the development of a mixture with just 70 kg CO₂e.

Keywords : waste reuse, fly ash, waste glass, hybrid cements, cost, embodied carbon

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