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# Experimental Investigation on Glass Fibre Reinforced Concrete Containing E Plastic Waste

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**Abstract :** Electronic waste or waste electronic and electrical equipment is an emerging issue posing serious pollution problems to the human and the environment<sup>1,4</sup>. New effective waste management options need to be considered especially on recycling concepts. Glass fibre reinforced concrete (GFRC) is a recent introduction in the field of civil engineering. In the view of global sustainable scenario, it is imperative that fibres like glass, carbon, aramid and poly-propylene provide very wide improvements in tensile strength, fatigue characteristics, durability, shrinkage characteristics, impact, cavitations, erosion resistance and serviceability of concrete. This paper presents the results of an investigation to study the performance of glass fibre reinforced concrete prepared with E plastic waste as part of coarse aggregate. An experimental study is made on the utilization of 0.1% glass fibre (by the weight of concrete) and E waste particles as coarse aggregates in concrete with a percentage replacement ranging from 0 % to 30% on the strength criteria of M30 Concrete. The results indicated that the E-plastic aggregate up to 20% weight of the coarse aggregate and 0.1% glass fibre (by the weight of concrete) can be used effectively in fibre reinforced concrete and thus results in waste reduction and resources conservation.

**Keywords :** Glass Fiber, E-Plastic waste, Compressive strength, Split tensile strength

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