

Exploring engineering properties of waste tire rubber for construction applications - a review of recent advances

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ABSTRACT

A sizeable amount of tire rubber waste is generated due to the increasing number of road automobile users all over the world. The accumulation of this waste in the open area poses environmental threats and therefore requires suitable treatments. The use of waste obtained from tire rubber as a construction material could contribute to a circular economy, while at the same time be an eco-friendly method of minimizing the depletion of raw materials used for the development of building materials. This study aims to show the impact of crumb rubber (CR) on the properties of concrete. This review covers the environmental consideration of fresh and hardened properties of composites developed using waste tires. The results show that the plastic nature of CR with suitable admixture led to increasing slump value and consequently enhanced the CR concrete workability.

KEYWORDS

Concrete; Crumb rubber; Environmental issues; Mechanical properties; Tires rubbers

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