

Review of: "The Effects of Polypropylene Wastes on the Compressive Strength of Grade 25 Concrete"

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Potential competing interests: No potential competing interests to declare.

The study investigates the impact of polypropylene waste on the compressive strength of grade 25 concrete, driven by the need to address environmental pollution and its contribution to flooding. This research utilizes an experimental approach to assess how varying proportions of polypropylene waste, pulverized to sand particle sizes, affect concrete strength. The polypropylene was incorporated at 5%, 10%, 15%, and 20% by weight as a partial sand replacement, and the concrete samples were cured for 7, 14, 21, and 28 days.

Further research could expand on these findings by exploring the long-term durability of concrete with polypropylene waste, assessing other mechanical properties, and evaluating the economic feasibility of this sustainable practice. Additionally, optimizing the particle size distribution and surface treatment of the polypropylene waste could potentially enhance the performance of the concrete, making it an even more viable option for widespread adoption in the construction industry.