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.

1. The source of polypropylene waste should be included, as well as all its specifications, including chemical composition (whether it is a monomer or copolymer), the levels of non-polymeric contaminants, infrared spectra, and physical and mechanical characteristics. The determination of its specific gravity is not enough to identify the polymer waste!
2. Regarding the water absorption test, the authors didn't explain why the water intake increases at 15% and 20% of polypropylene waste.
3. The authors recorded an initial decrease in compressive strength at 5% PP, but an increase was experienced at 15% PP for all curing durations of the PP concrete. The reason they suggested is not logical at all. They mentioned that the sudden increase in compressive strength might be due to the increased water absorption intake of the PP concrete at 15% weighted replacement and related that to the findings of Subramani and Pugal (2015). Subramani and Pugal concluded that the initial increase of compressive strength may be due to the proper bonding of the polymer they used (PET) with the fine aggregate and not to the water absorption intake of the polymer!!
4. Moreover, the authors didn't clarify why the compressive strength decreased at 20% weighted replacement, as illustrated in Figure 2,
5. References should be updated.

Overall, the properties studied are limited. The authors should investigate other strength properties, including flexural strength, and also durability properties. The overall findings will suggest the feasibility of using the polymer waste.