Review of: "Analytical Study and Amelioration of Plastic Pavement Material Quality"

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Potential competing interests: No potential competing interests to declare.

Authors present work performed to analyze and ameliorate the qualities of plastic pavement for redefining the qualities of the existing plastic pavement in Cameroon. They employed PET and PP as binding materials for the production of plastic pavement.

The formulation of the pavement samples, defined by the authors as follows: “for evaluating the binding characteristics of polypropylene (PP) in each pavement, was defined as 10%, 15%, 20%, 25%, 30%, 35%, 40%, 45%, and 50%, and that of polyethylene terephthalate (PET) was defined as 10%, 15%, 20%, 25%, 30%, and 35% by weight of the total sample,” should be rewritten, indicating that mixtures were made with sand and those percentages of PP or PET, but just placing the symbol % for the last one, like "10, 20….and 50%). It is not necessary to place % after each amount. I suggest including a table with all the systems analyzed as potential pavement candidates.

They carried out physical and mechanical characterization. When showing the mechanical findings in the abstract, they refer to “less-traffic areas” and “low-traffic areas,” which would suit better, in my opinion.

They interestingly present the properties of different pavement formulations and suggest the potential use of each one in different zones with different requirements. I find this manuscript and work very interesting because, due to the poor quality of road infrastructures, mainly in rural zones of Cameroon, and the huge amount of plastic waste, the employment of the latter in pavement development is interesting from both points of view.

After a proper introduction with adequate references, materials and methods are well presented, while the preparation procedure is shown in an easy and reproducible way.

Regarding results and discussion, Figure 6, showing compressive test results, should be improved. The same can be said for flexural test results shown in Figure 8. They should also include deviations or errors for the values presented.

Porosity and water absorption values are presented correctly, allowing comparison among the different formulations. They also interestingly compare their mechanical properties with those for pavements produced commercially in Cameroon. The improvement obtained by the authors is clear. My main suggestion is to include deviations and errors for the mechanical properties shown. It would also be interesting to include some more references in the field, as 11 seems to be a low amount….

With those changes, the manuscript would be ready for publication.