

Peer Review

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

Johnson A. Oyewale¹

1. Mechanical and Industrial Engineering Technology, University of Johannesburg, South Africa

In this paper, the authors analyse and ameliorate the qualities of plastic pavement by redefining the existing plastic pavement using Cameroon as a case study. The research is of great significance. Here are some opinions; please revise.

- **Need for statistical analysis**

The paper presents a range of compressive and flexural strength values, but it doesn't include any statistical analysis, such as standard deviation, error bars, or significance testing. Adding statistical validation would make the results more credible and easier to reproduce.

- **Limited contextual benchmarking**

The paper compares its results to those of existing pavement materials in Cameroon, but it does not give enough quantitative comparisons with international standards or best practices. It would be more useful and globally relevant if the study were compared to values from ASTM, BS, and EN standards.

- **Reporting of data that is not consistent**

Units and terms are not always the same, such as when "MPa" and "kN" are used interchangeably without a clear conversion or explanation. Similarly, the results for the flexural and compressive strength of different formulations are not summarised in a comparative table.

- **Insufficient economic and environmental evaluation**

The study only looks at mechanical characteristics; it does not assess the cost-effectiveness or environmental advantages (like a smaller carbon footprint) of using recycled plastics in pavement. Such

evaluations would be more in line with the objectives of sustainable engineering.

- **The language**

The manuscript has multiple grammatical errors and informal expressions (e.g., “absolutely at the end of this work”). Instead, “In conclusion, the following key findings were established” could be used.

Declarations

Potential competing interests: No potential competing interests to declare.