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

Qing Lu[1]

1 University of South Florida

Potential competing interests: No potential competing interests to declare.

This manuscript presents a lab study on the properties of specimens prepared with a mix of plastic materials and sand. The topic of the study is interesting and of potential value for application in paving projects. The conclusions are supported by the data presented in the manuscript. However, the following comments should be addressed before the manuscript may be considered for publication.

1. In the abstract, the meaning of the sentence "*The formulation of the pavement samples 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*" is ambiguous. Please revise it.
2. In the abstract, please be specific about the type of stress in "*could withstand a stress equivalent to 27.6 MPa*" and the type of load in "*withstand a load of 22.4 kN*."
3. In the Introduction section, what does 0.267% mean in "*with a sand composition of 1:7 as low as 0.267% and*"?
4. In the Introduction section, you may change the unit N/mm2 to MPa.
5. Explain how Db and Dt (i.e., bulk density and absolute density) were measured or calculated.
6. How was compressive strength calculated from test data? Please explain it.
7. What type of stress is sigma in Equation (3)? It seems to suggest that sigma is an average shear stress. Is this correct??
8. How was flexural strength calculated from test data? Please explain.
9. Are the test results presented in the figures average values of multiple tests? Please use error bars on the bar charts to indicate the range of variance of test results.
10. More details should be provided to describe the experimental design, such as the number of duplicated specimens, the testing conditions (e.g., temperature).