Glassphalt Concrete Production Using Stone Dust as a Filler through Trial Mix Design.

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Abstract- **Various studies have shown that waste glass has been crushed and screen and can serve as an alternative replacement of fines and coarse aggregate when mixed with Bitumen to form a glassphalt concrete which can be used in landscaping or non-load bearing walls in a building. This researched work was intended to compare and analyze the hot mix glassphalt (HMG) and the strength of asphalt concrete using trial mix design through investigative of their performances. The mineral fillers with different percentage by total weight of the mixture used in the study were crushed igneous rock that passes from 0.075mm to 200mm sieve sizes. However, this production did not only establish the usage of glassphalt but also analysis grade of bitumen like 60/70, 30/40, 80/100, 180/200 etc, its sustainability for various road uses either for priming eg. MCI, tackcoat eg. RSI, or surface dressing e.g S125. Various tests were conducted like water absorption test, marshal stability test, void ration test etc. using bitumen grade 60/70 which has a flash point of 250°c and a melting point of 48 – 56°c. Different types of glassphalt concrete was classified: Macadam, Binder course and wearing course with experimental design to determining the maximum deformation load that will deform the glassphalt concrete to aid in predicting its design life span and equally makes necessary recommendations.**

Keywords: **Bitumen, Glassphalt Concrete, Production, Design Life, Trial Mix,**

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