

The Modification of Fiber-Containing Porous Asphalt with Various Additives: A Review

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Abstract

The use of porous asphalt pavement has increased in recent years compared to conventional asphalt pavement. In this regard, pedestrian walkways and parking lots often make use of porous asphalt. These kinds of additives should be used in porous asphalt pavement because they enhance the pavements serviceability and mechanical performance. These types of pavement are used in various types of fiber and additives to improve the porous asphalt pavements physical characteristics and decrease the air void in the asphalt mixture. Incorporating different types of fibers with various types of additives should increase the overall performance of porous asphalt pavement though fiber has a significant impact over the additives on pavement structure. However, some additives increase the mechanical properties of porous asphalt. Pavement design mechanism and size of aggregate is a valuable component of serviceability of porous asphalt pavement. Consider all this factor it is easily determines the strength and durability of porous asphalt pavement in the context of physical and mechanical performances. This review focus on the overall performances of porous asphalt incorporating fiber with various types of additives

Keywords: Porous asphalt; Asphalt modification; Aggregate gradation; Additives; Incorporating fiber