

INVESTIGATION OF MOISTURE SUSCEPTIBILITY IN HOT-MIX ASPHALT CONCRETE

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ABSTRACT

The primary objective of this study was to evaluate moisture susceptibility on specimens prepared in the laboratory. Two liquid chemical-based and Hydrated Lime normally used in California were investigated. SuperPave mix design was employed and specimens of 4-inch diameter and 2.83-inch height were fabricated to test for moisture susceptibility employing Modified Lottman Test and Immersion Compression Test (ICT). For all the combinations tested in this study the Tensile Strength Ratio (TSR) ratio exceeded the 80 percent threshold. A peak amount of additive for both liquid additives and hydrated lime were observed for all agents tested in this study. Results from the ICT showed a retained compressive strength greater than the 75 percent threshold. However, the authors don't recommend its use as a tool to investigate moisture susceptibility in Hot Mix Asphalt (HMA) concrete. The two liquid antistripping proved to be cost effective as compared to hydrated lime additive investigated in this study.