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## Simple Method for Predicting Laboratory and Field Permeability of Hot Mix Asphalt

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**Abstract:** Abstract The infiltration of water in asphalt pavements promotes moisture damage , primarily by damaging the binder cohesive bond and the adhesive bond between aggregates and binder. The first step in addressing the problems caused by the presence of water within pavement systems is quantifying the permeability of hot-mix asphalt (HMA) mixes. A simple equation for predicting the permeability of HMA has been developed . This equation includes parameters that quantify percentage air voids, aggregate gradation, and asphalt binder content. Pavement engineers can use this formula to design asphalt mixes that exhibit acceptable levels of permeability. A comprehensive database of materials and laboratory and field permeability measurements was used to calibrate the equation. Consequently, the ability of the equation to predict the permeability of field cores that were not used in the calibration process was verified. Included is an example illustrating the usefulness of the equation in estimating the permeability distribution in asphalt pavements by using mix properties.