

EFFECTS OF TREAD GROOVE DEPTH ON MEASURED COEFFICIENT OF FRICTION USING
THE BRUNGRABER MARK II SLIPMETER

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Abstract

Shoe soles of various tread design are very common. Tread pattern or the geometry of the shoe affects friction under dry or contaminated conditions. Verification of the effects of tread groove depth is significant in assisting the managers and/or supervisors in selecting and replacing proper footwear for workers exposed in slippery floor conditions. Previous studies has shown that both the tread groove width and tread groove orientation affected coefficient of friction (COF) measured using the Brungraber Mark II slipmeter significantly. In this study, we measured the COF on terrazzo, steel, and vinyl floors under three liquid-contaminated conditions using footwear pads with tread groove depth from 0 to 5 mm. The results showed that tread groove depth affected the measured COF significantly. Higher COF values were recoded for footwear pads with deeper tread grooves.

Keyword : Slip and Fall, Brungraber Mark II Slipmeter, Coefficient of Friction, Tread Groove Depth