

Non-Shrink no Crack Concrete

John Higgins, the immediate past president of the Tasmanian branch of the Concrete Institute of Australia has been pouring some difficult topping coats using Tec-Cement concretes and was pleased to find little or no shrinkage. At 10% substitution of MgO for PC the shrinkage was less than half normal. At 18% substitution with no added pozzolan there was no measurable shrinkage or expansion.



Doorstep Topping Coat

The above photo shows a tec-cement concrete topping coat (with no flyash) 20mm thick away from the door and 80 mm thick near the door. Note that there has been no tendency to push the tiles or shrink away from the borders as would normally be the case.



Control on Left, Tec-Cement Concrete on Right

A 10% MgO Tec-Cement concrete with flyash (on the right in the photo above) was used to create a difficult topping coat varying in thickness from 20mm to over 80mm. Compare this to control on the left showing typical plastic shrinkage (inset).