ABSTRACT

The aim of this study was to investigate the long-term strength of rubberised concrete paving blocks. The effect of three curing conditions on compressive strength was studied. Additional strength tests which included flexural and splitting tensile strength were conducted to deter- mine the strength characteristics and to enhance the understanding of the blocks' properties. Four batches of blocks that replaced sand volume with crumb rubber at 0, 10, 20 and 30% were produced in a commercial plant. The results showed that 10% replacement of crumb rubber did not show any significant change in compressive strength but slightly improved the flexural strength. As the rubber content exceeded 20%, the blocks exhibited a great reduction in strength although ductility increased greatly. It was found that the block specimens tested remained intact after failure and did not shatter. This would be beneficial for trafficked roads.