

ACI 506.3, ACI 506.4 and ACI 548.1.

- e. Prior to the start of the work each nozzle man will be subject to certification by the Engineer in accordance with ACI 506.3
- f. The Contractor has to spray shotcrete in to the approved moulds for cutting cores. Cores shall be taken as directed by the Engineer for the specified tests.
- g. The Contractor shall be allowed to start the works only after the Engineer has approved the materials mix design, nozzlemen and the site procedure including mixing procedure.
- h. The finished surface shall be smooth, free from voids, cracks, honeycombing, and suitable for the application of surface coatings or other finishes as applicable.

## **9.2.6 Concrete**

- A. Requirements for C40/10 concrete shall be in accordance with Section 03300 of the specification.

## **9.2.7 Micro-Concrete**

- A. Shall be supplied as a pre-bagged special purpose product requiring only the addition of a pre-determined volume of water at site to produce a mix of predictable performance.
- B. Micro-concrete shall be a single component, shrinkage controlled, free flowing concrete without segregation of the materials with the properties given in Table 9-3 below.

**Table 9-3:– Micro-Concrete Properties**

Property	Test Method	Value
Min compressive strength	BS 4551	60 N/mm2 at 28 days
Min flexural strength	BS 6319-3	9 N/mm2 at 28 days
Min tensile strength	BS 6319-7	5 N/mm2 at 28 days
Water absorption	BS 1881	< 2%
Drying shrinkage	ASTM C157	< 300 micro strain at 7 days < 500 micro strain at 28 days
Rapid chloride penetration	ASTM C1202	1000 coulombs max

- C. Bonding agents and ancillary material shall be as recommended by the repair material manufacturer, unless otherwise directed by the Engineer.

## **9.2.8 Epoxy Lining Mortar**

- A. Epoxy lining mortar shall be a heavy duty, high strength, durable, chemical and abrasion resistant trowel-applied epoxy resin lining mortar with the physical