

- D. The substrate should be primed and the agreed material to be used for the repair mixed, applied and cured all in accordance with the manufacturers recommendations.
- E. Surface finishes and tolerances for all repair areas shall comply with Sections 03100 and 03300 of the specification, unless approved otherwise by the Engineer.
- F. Contractor shall conduct pull-off tests on all concrete repair applications as directed by the Engineer in accordance with the requirements of BS EN 1542. All failures shall either be in the substrate or if the failure occurs at the interface between repair material and substrate or within the repair material the minimum pull off value shall be 1.5N/mm<sup>2</sup>. One pull off test shall be conducted for every 50m<sup>2</sup> of each type of repair.
- G. Frequency of sampling and test requirements for concrete repair systems shall be as follows:
  - a. Cementitious mortars. 6 cubes shall be taken for every 400 bags utilized with 3 cubes being tested for compressive strength and 3 cubes for rapid chloride penetration at 28 days.
  - b. Shotcrete. Two number 800mm X 800mm X 200mm samples shall be taken from shotcrete applications on a daily basis. 3 cores shall be taken at 7 days and 3 cores at 28 days and tested for compressive strength. For every 15th sample 1 core shall be taken at 28 days and tested for rapid chloride penetration.
  - c. Concrete shall be sampled and tested for compressive strength and rapid chloride penetration in accordance with the requirements of Section 03300 of the specification.
  - d. Micro-concrete. 6 cubes shall be taken for every 100 bags utilized with 3 cubes being tested for compressive strength and 3 cubes for rapid chloride penetration at 28 days.
- H. In the event of the test results not achieving the specified requirements the Contractor shall remove the defective work and reinstate the repaired area to the satisfaction of the Engineer.

### **9.3.7 Repair Using Epoxy Resin Mortars**

- A. Primer shall be applied to the substrate ensuring that it is well brushed into the prepared surface taking care to avoid uneven film thicknesses. Only one coat of primer shall be allowed.