Renderoc® LA55 Plus

**High strength, free flowing, micro-concrete structural repair mortar**

**1.00** Where designated on the drawings, repairs to concrete will be made using a free flowing, shrinkage compensated micro-concrete mortar compatible with concrete 30-75MPa and conforming to the requirements of EN 1504-3 Class R4 and the requirements of durability to RMS B80 concrete specification.

**1.10 Preparation**

Saw cut or cut back the extremities of the repair locations to a depth of at least 25mm to avoid feather edging and to provide a square edge. Break out the complete repair area to a minimum depth of 50mm up to the sawn edge. Clean the surface and remove any dust, unsound or contaminated material, plaster, oil, paint, grease, corrosion deposits or algae.

**1.11** **Steel Reinforcement**

 Expose fully any corroded steel in the repair area and remove all loose scale and corrosion deposits. Steel should be cleaned to a bright condition paying particular attention to the back of exposed steel bars. Grit-blasting is recommended for this process.

 Where a reinforcement coating is required as an active corrosion protection barrier, apply one full coat of a suitable zinc-rich primer and allow to dry before continuing.

**1.12 Substrate Priming**

 The prepared substrate must be thoroughly soaked with clean water and any excess removed prior to the application of the repair mortar.

**1.20 Repair Mortar**

 The repair mortar shall be a single-component low alkali cement-based blend of powders to which only the site addition of clean water shall be permitted.

The repair mortar is to be non-hazardous in accordance with Australian Inventory of Industrial Chemicals containing <0.1% RCS (Respirable Crystalline Silica).

 The repair mortar shall exhibit the following typical properties:

|  |  |
| --- | --- |
| **Compressive strength (AS1478.2-2005):** | 75 MPa @ 56 days |
| **Flexural strength (AS1012.11-2000):** | >10 MPa @ 28 days |
| **Indirect tensile strength (AS1012.10-2000):** | 5.5 MPa @ 28 days |
| **Drying Shrinkage (25 x 25 x 285 prisms @ 27oC, 55% RH) AS 1478.2 – 2005:** | < 200 microstrain @ 7 days< 300 microstrain @ 28 days |
| **Alkali reactive particles**  **RTA Rapid Mortar Bar Test RTA T363:** | <0.1% (Non-Reactive) |
| **Flow (AS1478.2 – 2005 flow trough):** | 750mm |
| **Electrical Resistivity** **AASHTO TP 95:2014 (50 mm Probe Spacing):** | 17,000 ohm.cm @ 28 days194,000 ohm.cm @ 56 days |

1.21 The repair mortar shall be applied using “form and pour” process or pumped in accordance with the manufacturer’s product data sheet.

**1.30** **Fosroc Renderoc LA55 Plus** with **Nitoprime Zincrich** meet the performance criteria and are approved.

Mar-07

Mar-07