Guncrete E

**Dry-spray applied, high strength, high build repair mortar**

* 1. **Concrete Repairs**

1.10 **Steel reinforcement primer**

The steel reinforcement primer shall be a single component zinc-rich epoxy resin. It shall be fully compatible with the concrete repair system.

1.20 **Concrete Repair Mortar**

The repair mortar shall be a single component, polymer-modified, cement-based blend of powders to which only the site-addition of clean water shall be permitted. It shall be manufactured to achieve maximum compatibility with reinforced concrete with a compressive strength greater than 45MPa and, as a consequence, shall exhibit the following characteristics:

|  |  |  |  |
| --- | --- | --- | --- |
| **Test method** | **Standard** | **EN 1504 R4**  **Requirement** | **Test result** |
| **Compressive Strength** | EN 2190:1999  AS 1478.2 – 2005 | > 45 MPa  - | 84.0 MPa @ 28 days  35 MPa @ 1 day  60 MPa @ 7 days  70 MPa @ 28 days |
| **Capillary Absorption** | EN 1307:2002 | ≤0.5 kg/(m2 x h0.5) | 0.1 kg/(m2 x h0.5) |
| **Carbonation Resistance** | EN 13295:2005 | d < ref concrete | Conforms |
| **Coefficient of thermal expansion** | EN 1770:1990 | Declared Value | 16.3 x 10-6 / ºC |
| **Shrinkage and Expansion** | EN 12617-4:2002 | > 2.0 MPa | Shrinkage: 2.7 MPa  Expansion: 2.8 MPa |
| **Elastic Modulus** | EN 13412:2008 | > 20 GPa | 52.8 GPa |
| **Chloride Diffusion** | Nordtest NT Build 443 | - | Dₑ: 1.0 x 10-12m²/sec |
| **Flexural Strength** | AS1012.11 – 2000 | - | 10.1 MPa @ 28 days |
| **Tensile Strength** | AS1012.10 - 2000 | - | 5.5 MPa @ 28 days |
| **Drying Shrinkage** | AS 1012.13-1992 | - | < 500 microstrains @ 7 days  < 600 microstrains @ 56 days |

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

1.30 **Fosroc Guncrete E** and **Nitoprime Zincrich** meets the performance criteria and is approved for this application.