SmartPatch NS
Non-Shrink Repair Mortar

SmartPatch NS is a one-component polymer modified cementitious repair mortar with non-shrink properties. It is ideal for small patch repairs and filling of voids, rigid joints, cracks, etc.

FIELDS OF APPLICATION
- Small patch repairs
- Filling of voids, joints, cracks, etc.

BENEFITS
- Non-shrink
- Single-component, premixed system
- Good bond to sound concrete
- Good workability and water retention
- Suitable for interior and exterior applications

TECHNICAL DATA (under laboratory conditions)

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>TYPICAL RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressive Strength</td>
<td></td>
</tr>
<tr>
<td>(ASTM C 109 : 1992)</td>
<td></td>
</tr>
<tr>
<td>@ 1 day</td>
<td>20 N/mm²</td>
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<tr>
<td>@ 28 days</td>
<td>50 N/mm²</td>
</tr>
<tr>
<td>Volume Change</td>
<td></td>
</tr>
<tr>
<td>(ASTM C 827 : 1995)</td>
<td></td>
</tr>
<tr>
<td>@ 3 days</td>
<td>+ 1.5%</td>
</tr>
<tr>
<td>@ 28 days</td>
<td>+ 1.5%</td>
</tr>
<tr>
<td>Flow Consistency</td>
<td></td>
</tr>
<tr>
<td>(ASTM C 827 : 1995)</td>
<td></td>
</tr>
<tr>
<td>after 5 drops</td>
<td>35 - 40%</td>
</tr>
<tr>
<td>Coutinho Ring Test</td>
<td></td>
</tr>
<tr>
<td>@ 28 days</td>
<td>No Crack</td>
</tr>
<tr>
<td>Setting Time</td>
<td></td>
</tr>
<tr>
<td>(ASTM C807 : 1005)</td>
<td></td>
</tr>
<tr>
<td>Initial Set</td>
<td>3 - 4 hours</td>
</tr>
<tr>
<td>Final Set</td>
<td>4 - 5 hours</td>
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</tbody>
</table>

* Tested at water / powder ratio = 0.13

SURFACE PREPARATION
- Remove all defective concrete until sound concrete is found.
- To avoid feather edging, edges of the areas for repair must be saw cut to a depth of at least 10 mm.
- Concrete surfaces must be free of dirt, laitance, oil, grease and other contaminants.
- Exposed reinforced bars must be cleaned and protected with re-bar primer.
- Absorbent substrates must be pre-wetted with water.
- To ensure optimal bonding, the substrate should be primed with a bonding agent or SmartPatch NS slurry (2 parts SmartPatch NS + 1 part water). Wet-on wet application of the SmartPatch NS mortar is essential in this case.

MIXING
- SmartPatch NS should be mixed with a variable speed drill fitted with a paddle type mixer blade.
- For each 25 kg bag of SmartPatch NS, the amount of water may be varied between 3.0 - 3.5 litres to achieve different consistency.
- Pour the water into the mixing container and add SmartPatch NS slowly.
- Mix for 3 - 4 minutes until a lump-free, homogeneous consistency is obtained.

DISCLAIMER
All information was prepared carefully, using current references available to us. Information provided is to the best of our knowledge and belief, accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself/herself as to the suitability and completeness of information provided here for their intended use. We do not accept liability for any loss or damage that may occur from the use of this information.
**PLACING**

- Apply SmartPatch NS onto the primed substrate by trowel or gloved hand when the bonding agent becomes tacky.
- For horizontal or vertical application, SmartPatch NS can be applied at a thickness of 10 – 40 mm in one layer. SmartPatch NS is not recommended for overhead application.
- Thicker sections can be achieved by building up in layers. Scratch the previous layer to provide a mechanical key. Application of the next layer may proceed as soon as the previous layer has set.
- SmartPatch NS can be finished with a steel / plastic / wood float or a sponge depending on the surface texture required.

**PRECAUTIONS**

- Avoid eye and skin contact as the product is alkaline.
- Gloves, goggles and dust mask should be worn.
- Avoid inhalation of dust during mixing.
- Wash thoroughly after handling.
- In case of eye contact, flush with plenty of clean water. Seek medical help immediately.

**PACKAGING & STORAGE**

SmartPatch NS is supplied in 25 kg bags and has shelf life of 12 months if stored in a cool and dry place in sealed packaging with sheltered protection from rain and sunlight.

**CURING & PROTECTION**

- When strong winds, warm temperatures or direct sunlight are present, rapid moisture loss from the exposed surface may result in plastic cracking and excessive dusting in later age.
- To prevent these defects, SmartPatch NS should be protected with plastic sheets, wet hessian cloth or curing compounds.
- Curing compounds are recommended on the finished surface but not on intermediate layers.

**COVERAGE / YIELD**

When mixed with 3.25 litres of water, each 25 kg bag of SmartPatch NS will yield about 13 litres of patching mortar.

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