

SmartPatch PM

One-component Repair Mortar

SmartPatch PM is a one-component medium-weight polymer modified cementitious repair mortar which is suitable for general concrete repair in horizontal, vertical and overhead applications. It may be used for small, patch repairs of scaled and spalled concrete or reinstatement of large areas of damaged concrete.

FIELDS OF APPLICATION

For horizontal, vertical and overhead repairs of:

- Small, localised patching of spalled concrete
- Reinstatement of large areas of damaged concrete

BENEFITS

- Single-component, premixed system
- High build without formwork
- Excellent bond to sound concrete
- Good workability and water retention
- Suitable for interior and exterior applications

TECHNICAL DATA (under laboratory conditions)

PROPERTY	TYPICAL RESULTS
Compressive Strength (ASTM C109) @ 28 days	≥ 40 N/mm ²
Flexural Strength (ASTM C348: 1995) @ 7 days @ 28 days	4 N/mm ² 6 N/mm ²
Tensile Strength (BS EN 1015 - 12)	≥ 1.5 N/mm ²
Shrinkage (ASTM C531) @ 28 days	≤ 0.08 %
Fresh Wet Density	1.75 kg/m ³
Stiffening Time (BS EN 1015 - 9) @ 1.0 N/mm ² @ 2.0 N/mm ²	≤ 6.5 hours ≤ 8 hours



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. Avoid excessive application of bonding agent.

MIXING

- **SmartPatch PM** should be mixed in a mortar mixer. For smaller batches, a variable speed drill fitted with a paddle type mixer blade can be used.
- For each 25 kg bag of **SmartPatch PM** the amount of water may be varied between 5.0 - 5.5 litres to achieve different consistency.
- Pour the water into the mixing container and add **SmartPatch PM** slowly.
- Mix for 3 to 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 PM** onto the primed substrate by trowel or gloved hand when the bonding agent becomes tacky.
- For vertical application, **SmartPatch PM** can be applied at a thickness of 10 - 40 mm in one layer without formwork. For overhead application, **SmartPatch PM** can be applied at a thickness of 10 - 25 mm in one layer.
- Thicker sections can also be achieved by the use of formwork or by building up in layers.
- If the above thickness are exceeded and sagging occurs, the excess material must be removed and the remaining material should be finished in the normal way. Scratch the surface to provide a mechanical key. Application of the next layer may be done as soon as the previous layer has set.
- **SmartPatch PM** can be finished with a steel / plastic / wood float or a sponge depending on the surface texture required.

CURING & TREATMENT

- 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 PM** should be protected with plastic sheets, wet Hessian or curing compounds.
- Curing compounds are recommended on the finished surface but not on intermediate layers.

COVERAGE / YIELD

When mixed with 5.0 - 5.5 litres of water, each 25 kg bag of **SmartPatch PM** will yield an estimated 17 litres of patching mortar.

PRECAUTIONS

- **SmartPatch PM** should not be used at temperature below +5°C.
- At ambient temperature above 30°C, the material should be stored in the shade. Working life will be reduced and mixing / application must therefore be carried out quickly. If the mix has stiffened, it must be discarded.
Do not add water to the mix to regain workability.
- 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 water. Seek medical help immediately.

PACKAGING & STORAGE

SmartPatch PM 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.

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