

BS 5F

Single Component, Polymer Modified, Fibre Reinforced Cementitious Repair Mortar



BS 5F is a one component thixotropic fibre reinforced polymer modified repair mortar. It can be applied vertically or overhead by low pressure wet-spraying or hand trowelling. BS 5F is reinforced with specially designed bean shaped, alkali resistant synthetic fibres for exceptional resistance to cracking. It is recommended for repair situations requiring application of mortar up to 50mm thickness in one layer.

Uses

- Extensive repairs to beams, columns and other structural elements.
- Repair of structural members subjected to repetitive loading.

Benefits

- Single component- Only addition of water required at site.
- Quality controlled, uniform, predictable results.
- No additional bonding agent required.
- Sprayable, virtually no rebound.
- Chloride free, safe for use in prestressed and reinforced concrete.
- Impermeable to aggressive elements.

Standards Compliance

BS 5F complies with ASTM C 109 for the testing of compressive strength. It complies with ASTM C348 for flexural strength testing and ASTM C307 for tensile strength testing.

Specification Clause

The dual shrinkage compensated, cementitious patch repair mortar shall be BS 5F with compressive strength of 35 Mpa at 7 days and 45 MPa at 28 days.

Properties

| | |
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| W/P Ratio | 0.16 |
| Fresh Wet Density | 2.05-2.20 gm/cc |
| Compressive Strength | 12 MPa at 1 day 25 MPa at 3 days 35 MPa at 7 days 45 MPa at 28 days |
| Flexural Strength at 7 Days (ASTM C 348) | 7 N/mm ² |
| Tensile Strength at 7 Days (ASTM C 307) | >3N/mm ² |
| Young's Modulus | 28 kN/mm ² |

| | | |
|------------------------------|---------------|--------------------------|
| Adhesion Strength | Bond | >2 N/mm ² |
| Creep Reduction | Strain | 10% |
| Modulus of Elasticity | | 25-28 kN/mm ² |

Dynamic Load Resistance- Can resist alternate loads, reversal loads & repeated loads cycle without major variations in the mechanical characteristic.

Instructions for Use

Correct substrate preparation is critical for optimum performance. The prepared surface should be structurally sound and free from contaminants. Remove concrete that has been saturated with oil or grease. Simple light sand-blasting will not provide a sufficient profile for most repairs.

Note: It is recommended that the decision on replacement of rebars is taken based on the advice of the structural engineer responsible for the works.

Mixing

BS 5F must be mixed mechanically. Use a heavyduty, slow speed, drill with spiral mixing paddle or a pan-type mixer attached to spray units with nozzle. Place approximately 80% of water in the mixer, keeping the mixer running, and add BS 5F slowly. Mix for 3-4 minutes or until a lump free mix is obtained. Add the balance 20% water and continue to mix until desired consistency is achieved. If ambient temperature is 30° C or more use chilled water and condition the bagged product in an air conditioned store prior to use. Maximum mixed temperature should be no more than 35°C. BS 5F can be used when the ambient temperature is between 5°C-40°C.

Placing

BS 5F has been formulated for placing both by trowel and spray application depending on the size and location of the repair area.

For best results before application by trowel apply the first layer by gloved hand including packing behind the rebars and then firmly trowel on the rest to required thickness. When applying by hand force BS 5F tightly onto the substrate to ensure intimate contact with the pre-wetted substrate. If applying by spray use the experienced nozzle man.

BS 5F

Curing

Good curing is essential, particular care is required in hot/windy conditions. Cure either by a single Maxcure CC 75 curing membranes, which is compatible with most subsequent protective coatings or by covering the work with plastic sheet fixed over wet hessian.

Health and Safety Instructions

BS 5F mortar does not fall into the hazardous chemicals list. However, it should not be swallowed or allowed to come into contact with skin and eyes.

Storage

BS 5F has a shelf life of 6 months when the ambient temperature is within the range of 20°C to 50°C. Should the temperature of the product fall outside this range, contact Thermax for advice.

Packing

BS 5F is available in 30 kg HDPE bags.

Coverage

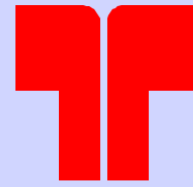
20kg/m² @ 10mm thickness

Other Segments:

- Concrete Admixtures • Surface Treatments • Grouts & Anchors • Repair & Rehabilitation
- Protective Coatings • Industrial Flooring • Waterproofing • Sealants • Adhesives

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