

Nafufill KM 250 M

Fibre-Reinforced, Polymer-Modified Concrete Repair Mortar

Product Properties

- Polymer modified
- Single-component
- Hand and spray application
- High resistance to carbonization
- Suitable for thickness of 6 to 50 mm
- Ideal application and hardening times

Areas of Application

- Repair mortar for non-trafficable areas, with or without dynamical load
- Repair of water retaining structures
- Concrete replacement

Application

SURFACE PREPARATION

Surface Treatment

The surface must be clean and free from all loose particles, dust, oil and other contaminants. A substrate pull-off strength $\geq 1.5 \text{ N/mm}^2$ is required. The substrate must have sufficient roughness; e.g. sound aggregates should be visible.

Manual Application

Before application of Nafufill KM 250 M, the bond coat, Nafufill KMH M, should be brushed into the moistened surface.

The repair mortar, Nafufill KM 250 M, should then be applied "fresh-in- fresh" to the bond coat by trowel or float.

Spray Application

In this case a bond coat is not required. Before application of Nafufill KM 250 M the surface should be moistened but not saturated.

Mixing

Nafufill KM 250 M is mixed with water. The powder is slowly added to the water and mixed thoroughly until a homogeneous, lump-free suitable mortar is achieved. Drum mixers or slowly rotating stirring paddles are suitable. Mixing should take approx. 5 minutes. Mixing by hand is not permitted. Use full pack sizes only.

Mixing ratio:

100 p.b.w. Nafufill KM 250 M 15-16 p.b.w. water. For a 25-kg bag of Nafufill KM 250 M about 3.75 - 4.00 l of water is required. Quantity of water may vary slightly due to application conditions.

Application

Nafufill KM 250 M can be applied by hand with floats or trowels, or by wet-spray technique. The spray machine MC-213 SP is particularly recommended. Working time is about 45 min at +20°C. Hardened or hardening material should not be re-mixed or applied.

Also, hardening material should not be re-worked, otherwise cracks may occur.

Nafufill KM 250 M should not be applied at temperatures below +5°C (air and substrate). The temperature should not be allowed to fall below +5°C during curing.

Manual Application

Nafufill KM 250 M is applied with floats or trowels to give a thickness of between 6 mm and 50 mm. Applications over 25 mm deep should be applied in two or more layers. The second and subsequent layer should be applied when the previous layer has stiffened sufficiently but it should not be dried out.

Spray Application

Nafufill KM 250 M is sprayed to give a thickness of between 6 mm and 50 mm. Applications over 25 mm deep should be applied in two or more layers. The second and subsequent layers should be applied when the previous layer has stiffened sufficiently, but is still not dry. Should the lower layer be dried out, it must be pre-wetted.

Curing

Care must be taken to ensure that Nafufill KM 250 M is suitably protected, especially from the effects of sun and wind, to prevent it drying out too rapidly. Rain or similar conditions can cause slight surface blemishes.

Before application of further coatings, loose particles must be removed.

Technical Data for Nafufill KM 250 M

Characteristics	Unit	Value	Comments
Max. Grain size	mm	< 2.0	
Fresh mortar density	kg/dm ³	2.0 – 2.1	
Dry density	kg/dm ³	~1.85	
Compressive Strength	N/mm ²	~ 40	2 days
		~ 50	7 days
		~ 60	28 days
Flexural Strength	N/mm ²	~ 10	2 days
		~ 12	7 days
		~ 19	28 days
Water Absorption @ 28 days (BS 1881: Part 122)	%	< 2.5	
Initial Surface Absorption (BS 1881: Part 208)	ml/m ² /sec	< 0.04	
Rapid Chloride Permeability (ASTM C1202)	coulombs	< 1000	
Slant Shear Strength	N/mm ²	>20	BS EN 12615: 1999
Dynamic E-modulus	N/mm ²	~32,500	after 28 days
Shrinkage @ 28 days	mm/m	~0.78	In-house method
Carbonization depth	mm	0	after 90 days
Coverage *	kg/m ² /mm	~1.8	
Layer thickness	mm		
Min. layer thickness		6	per application
Max. layer thickness		25	per application
Max. total thickness		50	per application
Water Dosage	litres	3.7 – 4.0	per 25kg bag
Working time	minute	~60	at + 05°C
		~45	at + 20°C
		~30	at + 30°C

* Coverage rates depend on the texture, temperature and porosity of the substrate, as well as on product storage and workability temperatures. To determine this exactly, a trial area should be laid and coverage noted.

Product Characteristics for Nafufill-KM 250 M

Packaging	25 kg bag
Storage	Can be store in shaded, cool and dry conditions for 12 months in original unopened packs
Disposal	In the interest of our environment please empty all packs completely and dispose of in accordance with statutory regulations.

Safety Advice

Please take notice of the safety information and advice given on the packaging labels and safety information sheets.

Note: The information on this data sheet is based on our experiences and correct to the best of our knowledge. It is, however, not binding. It has to be adjusted to the individual structure, application purpose and especially to local conditions. Our data refers to the accepted engineering rules, which have to observe during application. This provided we are liable for the correctness of this data within the scope of our terms and conditions of sale-delivery-and-service. Recommendations of our employees which differ from the data contained in our information sheets are only binding if given in written form. The accepted engineering rules must be observed at all times.

Edition 10/25. Some technical changes have been made to this print medium. Older editions are invalid and may not be used anymore. If a technically revised new edition is issued, this edition becomes invalid.