

Nafufill SM 04

Microsilica-modified, highly sulphate-resistant repair mortar

Product Properties

- One-component, only to be mixed with water
- Application by dry spaying technique
- In combination with a bond coat also suitable for hand application
- High carbonation resistance
- Resistant to temperature, frost-thaw and de-icing salts
- Open to water vapour diffusion and impermeable to water
- Non-flammable according to EN 13501-1 - building material A1
- Class R3 according to EN 1504 part 3

Areas of Application

- Dry sprayed mortar for partial and large-scale repair of concrete components at wall- and overhead areas
- Repair of partial ruptures also possible by hand application
- Suitable for creation of levelling layers in horizontal areas, both interior and exterior
- According to EN 206 suitable for exposure classes XC 1-4, XF 1-4 and XA 1-2
- Certified according to EN 1504 part 3 for principle 3 and 7, procedure 3.1, 3.3, 7.1 and 7.2

Application

Substrate preparation

See leaflet "General Application Advice Coarse Mortars/Concrete Replacement Systems".

Reinforced steel

See leaflet "General Application Advice Coarse Mortars/Concrete Replacement Systems". Nafufill MK should be used as corrosion protection coat.

Pre-wetting

Prior to application of Nafufill SM 04 the substrate must be pre-wetted thoroughly. If the concrete parts are dried out completely, pre-wetting should start one day prior to application. A closed water film must be avoided. When beginning to apply the substrate should be slightly damp but not saturated with water.

Application / Dry spraying technique

The water intake of the nozzle's mixing unit is to be adjusted to achieve a homogeneous and dust-free spray mortar. The spray angle between spray nozzle and substrate must be 90°. The distance of the nozzle to the substrate must be at least 0.5 m. Angle and distance may be adjusted when spraying behind reinforcement.

Nafufill SM 04 may be applied in one or more layers. The fresh surface can be left rough as sprayed or finished. Finishing of Nafufill SM 04 is not permitted after it has begun to set.

Hand application

For repair of ruptures and for creation of levelling layers on horizontal areas Nafufill SM 04 may also be applied by hand. Forced mixers or slowly rotating double-mixers must be used for mixing. Mixing takes 3 minutes. Mixing by hand or preparation of partial quantities is not permitted. For a 25 kg bag of Nafufill SM 04 approx. 2.75 to 3.0 litres of water are required.

Hand application / Bond coat

Nafufill BC is to be used as bond coat for hand application. See leaflet "General Application Advice Coarse Mortars/Concrete Replacement Systems".

Curing

Nafufill SM 04 must be cured for 5 days using moist jute and plastic foil. The jute must not dry out during this time and must be kept moist. Alternatively Nafufill SM 04 may also be cured with the curing agent Emcoril Protect M-lite.



Technical Data for Nafufill SM 04

Characteristic	Unit	Value*	Remarks
Largest grain size	mm	4	
Fresh mortar density	kg/dm ³	2.14	
Flexural tensile-/ compressive strength	N/mm ²	5.0 / 28.6 6.3 / 39.2	after 7 days after 28 days
Shrinkage	mm/m	0.76	after 28 days
Static E-modulus	N/mm ²	32,700 25,700	after 28 days (spray application) after 28 days (hand application)
Coverage (dry mortar)	kg/m ² /mm	1.91	
Application time	minutes	60 45 30	at + 5 °C at + 20 °C at + 30 °C
Layer thickness	mm	12 30 60 100	min. layer thickness per work step max. layer thickness per work step max. total layer thickness reprofiling of disruptions
Application conditions	°C	≥ 5 to ≤ 35	air-/material-/substrate temperature
Mixing ratio	p.b.w.	100 : 11.0 - 12.0	Nafufill SM 04 : water

Product Characteristics for Nafufill SM 04

Colour	cement-grey
Delivery	25 kg bags
Storage	Can be stored in cool and dry conditions for 12 months in originally sealed packs.
Disposal	Packs must be emptied completely.

* All technical values are lab values and have been determined at + 23 °C and 50 % relative humidity.

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 be observed 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 12/19. 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.