

Nafufill R3 FM

Curing-free high-performance fine mortar



PRODUCT PROPERTIES

- Curing-free fine mortar according to VGB Guideline R 612 U (2010) Paragraph 9.3.2.
- Two-component, polymer-modified fine mortar
- Application by hand and wet spraying technique
- Soft, easy-to-spread consistency
- May be used as pore filler, scratch coat and surface filler
- High carbonation resistance and water retaining capability
- Resistant to elevated temperatures, frost and de-icing salts
- Tested and approved as OS 4 and OS 5a surface protection system
- Class R3 according to EN 1504 part 3
- Registered with DGNB (Code: ZS7Y TZ)
- Non-flammable, building material class A2-s1, d0 according to EN 13501-1

AREAS OF APPLICATION

- Fine mortar to level and even out concrete surfaces in building construction and civil engineering
- Tested and certified as inner tunnel coating system with MC-Color T 21 and MC-DUR 2496 CTP
- Curing-free fine mortar for structures such as cooling towers and chimneys in combination with MC-Color surface protection systems
- Certified in accordance with EN 1504 part 3 for principle 3, procedure 3.1 and 3.3.
- Fulfills the requirements according to Astra guideline „Tunnel Coating Systems and Colour Design“
- Fulfills the requirements according to ÖBV guideline „Tunnel Coatings“

APPLICATION ADVICE

Substrate preparation: See leaflet "General Application Advice Fine Fillers".

Mixing: The fine mortar consists of the dry mortar Nafufill R3 FM, Nafufill R3 FM Liquid and water. The dry mortar is added to Nafufill R3 FM Liquid and the minimum required quantity of water and mixed until homogeneous and lump-free. The remaining water is used to adjust the consistency and may be added as required. Forced mixers or slowly rotating double mixers must be used for mixing. Mixing by hand and preparation of partial quantities is not allowed. Mixing takes at least 5 minutes.

Mixing ratio: See table "Technical Data". For a 25 kg bag of Nafufill R3 FM approx. 2.0 litres of Nafufill R3 FM Liquid and 3.5 to 4.0 litres of water are required. As with other cementitious products the quantity of added water may vary.

Application: Nafufill R3 FM can be applied by hand or wet spraying technique. Hand application is carried out using a trowel or float. For wet spraying a worm pump with adjustable discharge flow should be used. Please request our technical advice or the equipment planner leaflet. Nafufill R3 FM can be applied in one or two layers, depending on application. If applied in two layers, the first layer must be worked into the substrate like a scratch coat.

Finishing: Following application of the final layer, Nafufill R3 FM is smoothed using a stainless steel float. Subsequently Nafufill R3 FM is rubbed using a fine pored sponge and smoothed again.

Overcoating time: The waiting times between the separate layers must be observed (see Table "Technical Values"). Nafufill R3 FM can be overcoated with MC-Color T 21 after 2 - 3 hours at 20 °C. The overworking time will reduce at higher temperatures and wind exposure.

Curing: Nafufill R3 FM is curing-free according to the test requirements of VGB Guideline R 612 U (2010) paragraph 9.3.2 (test under a wind load of 5 m/s over 72 hours at approx. 23 °C). At higher temperatures and/or wind loads, a proper curing must be carried out (see leaflet "General processing instructions fine filler").

TECHNICAL VALUES & PRODUCT CHARACTERISTICS

Characteristic	Unit	Value	Comments
Maximum grain size	mm	0.3	
Mixing ratio	p.b.w.	100 : 8 : 14 - 16	powder component : liquid component : water
Working time	minutes	60	at 5° C
		40	at 20 °C
		25	at 30 °C
Application conditions	°C	≥ 5 ≤ 30	Temperatura del aire, soporte y material
Consumption	kg/m ² /mm		
Powder component		1.75	
Liquid component		0.14	
Flexural strength	N/mm ²		
24 h		3.4	
7 d		8.5	
28 d		12.6	
Compressive strength	N/mm ²		
24 h		18.9	
7 d		43.4	
28 d		50.6	
E-modulus (static)	N/mm ²	15,800	after 28 days
Layer thickness	mm		skim coat
		1	minimum layer thickness per pass/operation
		3	maximum layer thickness per pass/operation
		3	maximum total layer thickness
Fresh mortar bulk density	kg/dm ³	2.05	
Shrinkage	mm/m	0.35	after 90 days
Overworkable after	hours	≤ 1	1st layer (scratch coat) / 2nd layer
Overcoatable after	hours	≥ 3	with MC-Color T 21
		≥ 24	with MC-DUR 2496 CTP

All technical values are laboratory results determined at 21°C ±2°C and 50% relative humidity.

Form	two-component
Colour	Cement grey
Delivery form	Nafufill R3 FM bag 25 kg, Nafufill R3 FM Liquid 30 kg canister
Storage	Can be stored in cool and dry conditions for at least 12 months in original unopened packs. Protect from frost.
Packaging disposal	Make sure single-use containers are completely empty.

GISCODE : ZP1

Note: The information contained in this data sheet is based on our experience and is correct to the best of our knowledge. It is, however, not binding. It will need to be adapted to the requirements of the individual structure, to the specific application and to non-standard local conditions. Application-specific conditions must be checked in advance by the planning engineer/specifier and, where different from the standard conditions indicated, will require individual approval. Technical advice provided by MC's specialist consultants does not replace the need for a planning review by the client or its agents in respect of the history of the building or structure. Subject to this prerequisite, we are liable for the correctness of this information within the framework of our terms and conditions of sale and delivery. Recommendations of our employees deviating from the information given in our data sheets are only binding for us if they are confirmed in writing. In all cases, the generally accepted rules and practices reflecting the current state of the art must be observed. The information given in this technical data sheet is valid for the product supplied by the country company listed in the footer. It should be noted that data in other countries may differ. The product data sheets valid for the relevant foreign country must be observed. The latest technical data sheet shall apply to the exclusion of previous, duly superseded versions; the date of issue in the footer must be observed. The latest version is available from us on request or may be downloaded from our website. [2400020937]