

Nafufill SC 08

Microsilica-modified shotcrete
for the repair and improvement of concrete structures



PRODUCT PROPERTIES

- One-component, only to be mixed with water
- Highly sulphate resistant, low active alkali content
- High carbonation resistance
- Resistant to temperature, frost-thaw and de-icing salts
- Impervious to water according to DIN 1045
- Non-flammable according to EN 13501-1 - building material class A1
- Registered with DGNB (Code: 3J1S41)
- Class R3 by hand application or R4 by spray application according to EN 1504 part 3

AREAS OF APPLICATION

- Base mixture according to DAfStb dry concrete guideline for the production of dry shotcrete according to DIN EN 14487 / DIN 18551
- Dry sprayed concrete for repair of walls and overhead areas in civil engineering and industrial constructions
- Suitable for creation of supporting walls and reinforcement of existing constructions
- Suitable for creation of levelling layers on horizontal areas
- According to EN 206/DIN 1045 for exposure classes XC1-4, XF1-4, XS1, XD1-3, XA1-2, XA3*, XSTAT, XALL, XO and moisture classes W0, WF and WA
- In dry spray application also for exposure class XALL, XO, XD1-3 and XS1-3
- Certified according to EN 1504 part 3 for principles 3 and 7, procedures 3.3, 7.1, 7.2 and 7.4

APPLICATION ADVICE

Substrate preparation: See leaflet "General Application Advice Coarse Mortars/Concrete Repair Systems".

Pre-wetting: Prior to application of Nafufill SC 08 the substrate must be pre-wetted thoroughly. If the concrete elements 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 repair shotcrete. The spray angle between spray nozzle and substrate must be 90°. The distance of the nozzle to the substrate must be 0.5 - 1.0 m. Angle and distance may be adjusted when spraying behind reinforcement.

Hand application: On horizontal areas Nafufill SC 08 can be applied by hand. Circular pan 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 SC 08 approx. 2.25 to 2.5 litres of water are required. To ensure an even layer thickness, height gauges should be used. All joints in the substrate must be transferred into the concrete replacement. At junctions of floor and wall a joint must be formed.

Additional information (bond coat): For hand application Nafufill BC is to be used as bond coat. See leaflet "General Application Advice Coarse Mortars/Concrete Replacement Systems".

Finishing: Following application Nafufill SC 08 can be smoothed and finished using a wooden or plastic float.

Curing: Nafufill SC 08 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 a liquid curing agent may be used.

***Remarks Exposure class XA3:** Protection against direct contact with aggressive medium required. System-compatible protective layers (paints, coatings) can be used as protective measures.

TECHNICAL VALUES & PRODUCT CHARACTERISTICS

Characteristic	Unit	Value	Comments
Maximum grain size	mm	8	
Mixing ratio	p.b.w.	100 : 9 - 10	powder component : water
Application conditions	°C	≥ 5 ≤ 30	air, substrate and material temperatures
Consumption	kg/m ² /mm	2.1	factory dry mortar (without rebound)
Flexural strength	N/mm ²		spray application
28 d		≥ 6	
Compressive strength ¹⁾	N/mm ²		applied by hand
24 h		7.5	
7 d		38.8	
28 d		43.7	
Compressive strength	N/mm ²		spray application
28 d		> 45	
E-modulus (applied by hand)	N/mm ²	33,000	after 28 days (static)
E-modulus (spray application)	N/mm ²	37,000	after 28 days (static)
Layer thickness ²⁾	mm	30	minimum layer thickness per pass/operation
		60	maximum layer thickness per pass/operation
		180	maximum total layer thickness
Fresh mortar bulk density	kg/dm ³	2.31	
Shrinkage (spray application)	mm/m	0.41	after 28 days
		0.61	after 90 days
Water penetration depth ³⁾	mm	< 15	EN 12390-8
4)		< 1	EN 12390-8

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

1) Strength class C35/45 in hand application according to DIN EN 206

2) vertical areas

3) sample preparation by hand

4) sample preparation in spray application

Form	pulverous
Colour	Cement grey
Delivery form	25 kg bag, loose
Storage	Can be stored in cool and dry conditions for at least 12 months in original unopened packs.
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. [2500026476]