Emcekrete 50 A

Slow-hardening grouting concrete

BE SURE. BUILD SURE.

PRODUCT PROPERTIES

- Ready to use - simply mix with water
- Highly flowable
- Swellable, shrink compensated
- High adhesive tensile strength on properly treated concrete surfaces
- Low hydratation heat development
- Pumpable, chloride free acc. to EN 934-1
- Water impermeable according to EN 12390-8
- Very high resistance to frost and de-icing salts acc. to CDF test (weathering 259.8 g/m², 28 FT-cycles)
- Non-flammable according to EN 13501- class A1
- Registered with DGNB (Code: UEZXD6)
- Certified as a grouting concrete according to DAfStb guideline "Production and use of cement-based grouting concrete and mortar"
- Certified acc. to EN 1504-3, class R3

AREAS OF APPLICATION

- Grouting concrete for applications acc. to ZTV-ING, part 6, paragraph 8 and 11
- Grouting concrete for applications acc. to the German Guideline for Concrete repair DAfStb, 3rd correction
- Grouting concrete for applications acc. to the German Guideline for Concrete repair DIBt, table 5 for principle 3, table 6 for principple 7
- Certified according to EN 1504-3 for principles 3, 4 and 7, procedures 3.2, 4.4, 7.1 and 7.2
- Grouting concrete for setting columns in sleeve foundations, for bridge bearings and crane rails
- Grouting concrete for cavities and hollow spaces, gaps, rigid joints between precast elements or between precast elements and in-situ concrete
- Grouting concrete for machine foundations, precision machinery, turbines, engines, steel constructions
- Suitable according to EN 206 for exposure classes XO, XC 1-4; XD 1-3; XS 1-3; XA 1-3, XF 1-4
- Exposed to alcali silica reaction for moisture classes WO, WF, WA

APPLICATION ADVICE

Substrate Preparation: Please refer to the data sheet “General Application Advice for hydraulically hardening grouting concrete and grouting mortars”. Please ensure an adequate pull-off strength of the substrate (e.g. averaged ≥1.5 N/mm², single value ≥1.0 N/mm²).

For use as repair concrete, reinforcing steels must be prepared according to DIN EN ISO 12944-4 in accordance with surface preparation grade SA 2 ½ when a corrosion protection product is applied. If the minimum concrete cover is observed, reinforcing steels do not necessarily have to be coated and a surface preparation grade SA 2 is sufficient.
The reinforcing steels must be free of flash rust and other separating or corrosion promotion substances. Compressed air blasting with solid grit is suitable to achieve the specified standard degree of cleanliness.

Emcekrete 50 A is pumpable with appropriate machines and tools. Please request our consulting in this case.

Mixing: Please refer to the data sheet “General Application Advice for hydraulically cured grouting concrete and grouting mortars”.

Application: Please refer to the data sheet “Application Advice for hydraulically cured grouting concrete and grouting mortars”.

In case Emcekrete 50 A is used as repair mortar Nafufill KMH is applied onto the blasted reinforcement in two work steps, using suitable painting tools (brushes, paint-brushes). Tying wires, edges and the juncture between reinforcement and concrete must be treated thoroughly to achieve the necessary layer thickness. Please refer to the Technical Data Sheet of Nafufill KMH.

Emcekrete 50 A is pumpable using suitable equipment. Please ask for our technical assistance.

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APPLICATION ADVICE

After treatment: Emcekrete 50 A must be protected quickly from direct sun and wind in order to avoid water loss. Curing usually takes 3 days.

TECHNICAL VALUES & PRODUCT CHARACTERISTICS

Characteristic	Unit	Value	Comments
Working time	minutes	approx. 90	at 5° C
		approx. 60	at 20 °C
		approx. 45	at 35° C
Application conditions	°C	> 5 < 35	Temperatura del aire, soporte y material
Consumption	kg/dm³	2.05	
Maximum grain size	mm	8	grading curve from 0 mm
Compressive strength	N/mm²		
24 h		approx. 20	
	N/mm²		
7 d		approx. 55	
	N/mm²		
28 d		approx. 65	
Flexural strength	N/mm²		
24 h		approx. 4	
	N/mm²		
7 d		approx. 6	
	N/mm²		
28 d		approx. 6.3	
Resistance to de-icing salts	g/m²	259.8	Weathering, 28 FTW per CDF
Wet bulk density	kg/dm³	2.3	
Grouting height	mm	> 25	DAfStb Code of Practice – Grouting
		< 320	DAfStb Code of Practice – Grouting
Water addition	l	approx. 2.75 - 3.12	per 25 kg
Slump flow class		a3	≥ 700 mm
Swelling dimension	%	> 0.1	per VeBMR-RiLi of the DAfStB
Shrinkage class		SKVB 0	$\varepsilon_{s,m,91} \leq 0.6$ ‰
Early strength class		C	≥ 10 N/mm² < 25 N/mm²
Compressive strength class	N/mm²	C50/60	
E-modulus (static)	N/mm²		EN 13412
		29,000	after 28 days
Water penetration depth	mm	3	at 5 bar gauge pressure per EN 12390-8
	All technical values are laboratory results determined at 21°C ±2°C and 50% relative humidity.		

Colour	grey
Equipment cleaning agent	water
Calculated yield	13 - 14 l per bag
Resistance to thermal cycling	yes
In-company production control	EN ISO 9001
Delivery form	25 kg bag, 40 bags = 1 pallet
Self-monitoring	EN ISO 9001
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.
Form	pulverous

Safety instructions
Please note the safety information and advice given on the packaging labels and safety data sheets. 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. [2300020215]

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