Betofix R4 SR

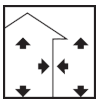
Fibre-reinforced PCC/SPCC (RM/SRM) for the static repair of concrete structures

Type/Name	Availability	
	Quantity per pallet	36
	Size / Quantity	**25 kg**
	Type of container	Paper bag
	Container code	25
	Art. no.	
grey	1084	■

Application rate

Approx. 2.0 kg/m²/mm layer thickness, or approx. 2.0 kg/dm³
Apply to a large enough trial area to determine the precise amount required.

Range of use



- Wet spraying method
- Repair and coating mortar according to DIN 19573
- Concrete replacement for structurally relevant repairs
- Concrete replacement according to
  - DIN 19573
  - DIN EN 1504-3
  - Rili-SIB DAfStb 2001
  - ZTV-ING
- In the drinking water sector, meets the requirements of DVGW Worksheet W 270 and W 347

Property profile

- High resistance to chloride penetration
- Sulphate-resistant
- Freeze/thaw-resistant
- Low effective alkali content (SR/NA)
- Spraying and centrifuge application
- Well suited to overhead working

Planning information

Betofix R4 SR - Classification									
acc. to Rili-Sib 2001	M3								
acc. to DIN EN 1504-3	R4								
Old concrete classes	A3		A4						
Compressive strength class acc. to. DIN 19573	B2								
Reaction to fire class	A1								
Impacts from the environment									
	XALL								
Carbonation	XC1		XC2		XC3		XC4		
Chlorides excluding seawater	XD1		XD2		XD3				
Chlorides from seawater	XS1		XS2		XS3				
Frost with/without de-icing agent	XF1		XF2		XF3		XF4		
Chemical attack	XA1		XA2		XA3				
Wear stresses	XM1		XM2						
Wastewater	XWW1		XWW2		XWW3				
Moisture class classification	WO		WF		WA				
Impacts from the concrete substrate									
Backfacing water	XBW1		XBW2						
Freshwater or seawater loads	XW1		XW2						
Static effect	XSTAT								
Dynamic stresses on application	XDYN								
Application									
Repair principles/procedures	3.1	3.2	3.3	4.4	5.3	6.3	7.1	7.2	7.4

Characteristic data of the product

Water requirement	Approx. 10.7%, equivalent to 2.7 l/25 kg
Capillary water uptake	≤ 0.5 kg/(m²h$^{0.5}$)
Shrinkage (28 days)	≤ 0.7 mm/m
Reaction to fire class	A1
Chloride migration coefficient after 28 days	1.17 x 10^{-12} m²/s
Compressive strength	1 d = ≥ 15 N/mm² 7 d = ≥ 40 N/mm² 28 d = ≥ 50 N/mm²
Flexural tensile strength (28 days)	≥ 8.0 N/mm²
Static modulus of elasticity	≥ 25000 N/mm²
Surface tensile strength	≥ 2.0 N/mm²
Maximum grain size	2 mm
External surveillance	QDB

The values stated represent typical characteristic data of the product and are not to be understood as binding product specifications.

Certificates

- **EC certificate QDB No. 0921-CPR-2042**

Additional information

- **Sustainability data sheet**

Possible system products

- **Betofix KHB (1087)**
- **Betofix KHB SR (1079)**
- **Betofix Fill (1008)**
- **Betofix Fill SR (1080)**

Preparation

- **Substrate requirements**

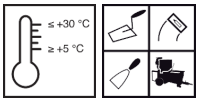
Concrete surface:
Stable, clean, dust-free
Observe the applicable technical regulations for the following parameters:
- Adhesive pull strength of the substrate
- Minimum roughness/roughness depth
Pre-wet the substrate so that it is slightly moist.
Reinforcement:
Degree of purity SA 2 ½ if applying corrosion protection, otherwise SA 2

Production of the mixture

Mixing
Prepare water, add dry mortar and mix until homogeneous.
Mechanical mixing only!

Mixing time: approx. 3 minutes
Maturing time: approx. 1 minute.
Final mixing time: approx. 1 minute

Directions



Conditions for use
Temperature of the material, air and substrate: from min. +5 °C to max. +30 °C.
Low temperatures increase, while high temperatures decrease the working and setting time.
Once it has hardened, mortar must not be made workable again by adding either water or more wet mortar.

Working time
(+20 °C): Approx. 60 minutes

Layer thickness
Single layer 5 - 25 mm
Two layers < 50 mm, apply wet on wet
Single layer in broken-out areas < 80 mm

Subsequent processing
Protect fresh mortar surfaces from wind, direct sunlight, rain and/or frost for at least 3 days so that they do not dry too quickly.

Machine working
Please contact Remmers Technical Service (phone +49 5432 83900) before applying with machine processing.

Tips on use

Automatic mixing only.

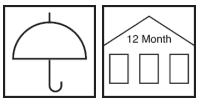
Tools / Cleaning

Mixing tool, trowel, smoothing trowel
Clean tools with water while the material is still fresh.

Remmers tools

- **Mischgefäß (4030)**
- **Profile Trowel (5047)**
- **Rundkelle (4114)**
- **Smoothing Trowel (4004)**
- **Glättkelle (4117)**
- **Smoothing Trowel Duo (4118)**

Storage / Shelf life



If stored in an unopened container and in a dry place, the product will keep for approx. 12 months.

Safety data / Regulations

For further information on the safety aspects of transporting, storing and handling the product and on disposal and environmental matters, please see the current Safety Data Sheet.

Disposal

Larger quantities of leftover product should be disposed of in the original containers in accordance with the applicable regulations. Completely empty, clean containers should be recycled. Do not dispose of together with household waste. Do not allow to enter the sewage system. Do not empty into drains.

Declaration of performance

Declaration of performance

Declaration of conformity

CE

0921

Remmers GmbH
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12
GBI-P 2-3
EN 1504-3: 2005
1084

Product for structural and non structural repair for concrete

Compressive strength class:	R4
Chloride ion content:	≤ 0.05 %
Adhesive bond:	≥ 2.0 MPa
Restrained shrinkage/expansion:	≥ 2.0 MPa
Carbonation resistance:	Passed
Elastic modulus:	≥ 20 GPa
Thermal compatibility part 1 & 4:	≥ 2.0 MPa
Skid resistance:	NPD
Capillary absorption:	≤ 0.5 kg/(m²h$^{0.5}$)
Reaction to fire class:	A1
Dangerous substances:	NPD