



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/(m ² h ^{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 m ² /s
Compressive strength	1 d = ≥ 15 N/mm ² 7 d = ≥ 40 N/mm ² 28 d = ≥ 50 N/mm ²
Flexural tensile strength (28 days)	≥ 8.0 N/mm ²
Static modulus of elasticity	≥ 25000 N/mm ²
Surface tensile strength	≥ 2.0 N/mm ²
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

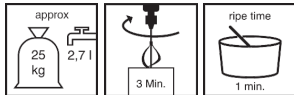
Observe the applicable technical regulations for the following parameters:

- 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**

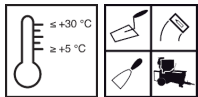
Prepare water, add dry mortar and mix until homogeneous.
Mechanical mixing only!

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

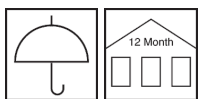
Clean tools with water while the material is still fresh.

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



0921

Remmers GmbH

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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/(m ² h ^{0.5})
Reaction to fire class:	A1
Dangerous substances:	NPD

Please note that the data and information given above have been calculated as guidelines in the laboratory and from real-life experience and are therefore not binding as a basic principle.

This information is therefore of a general nature only and describes our products and how they are used and worked with. In this respect, it must be borne in mind that the varied and diverse nature of the

prevailing working conditions, materials used and construction sites encountered means that not every individual case can be covered. In this respect, we therefore recommend either conducting tests or liaising with us in the event of any doubt. Unless we have provided express written assurance of the products' specific suitability or characteristics in respect of a contractually stipulated intended use, any technical application-related advice or instruction will never

be binding, even though it is provided to the best of our knowledge. In all other respects, our general terms and conditions of sale and delivery shall apply.

When a new version of this Technical Data Sheet is published, it shall replace the previous version.