

Technical Information Sheet Article No. 1093

Betofix R2

Versatile, fast repair mortar for repairing concrete in just a few hours.

Basic test R2 of RWTH-Aachen

Range of use

Remmers Betofix R2 is a very versatile and reliable fast repair mortar with numerous application areas when repairing concrete:

- Fast concrete repairs in facade areas
- For repairing superficial damage on concrete, reinforced concrete and light-weight concrete
- Mineral corrosion protection for reinforcement steel (modified with Remmers Rust Inhibitor M)
- Fast setting, mineral filling mortar for closing broken out areas. No additional bonding layer necessary!
- Fast setting, mineral filler and felled mortar for closing pipes, pores and uneven areas
- For re-working broken corners and edges, closing spacers, broken out areas and gravel pockets.

Property profile

Remmers Betofix R2 is a factory, mixed, highly modified, fast repair mortar that is ready to use after mixing with water. It sets and dries quickly hydraulically. Because of its versatile range of applications when repairing concrete, Betofix R2 allows work to be carried out very quickly and economically.

- Complete concrete repairs in just a few hours
- Versatile, fast repair mortar, for corrosion protection, can be used as a coarse and fine mortar. No bonding layer required!

- Very easy to use, high yielding
- Can be drawn out to zero, felled and worked over-head
- Can be drawn out to seamless, felled and worked over-head
- Can be used as a filler to level unevenness
- Can be applied in any thickness, high tensile strength
- Excellent adhesion
- Very low stress and crack-free
- Binds water quickly, can be coated over after 2-3 hours
- Frost resistant, can be used indoors and outdoors
- Can be worked by machine



Characteristic data of the product

Colour:	grey
Bulk density:	approx. 1.4 kg/dm ³
Mixing ratio:	4.5 l water to 25 kg of powder 0.9 l water to 5 kg of powder or 1 part by volume water to 4.0 parts by volume powder
Gross density of the fresh mortar:	approx. 1.6 kg/dm ³
Consistency:	for filling
Working time:	at 10 °C approx. 40 min. at 20 °C approx. 20 min.
Working temperature:	+5 °C to +25 °C
Commencement of setting:	approx. 60 min.
Compressive strength:	after 3 h: approx. 3 N/mm ² after 24 h: approx. 6 N/mm ² after 28 days: approx. 20 N/mm ²
Adhesive pull strength:	
7 days:	0.7 to 1.0 N/mm ²
28 days:	1.0 to 3.0 N/mm ² (depending on substrate)
Loading class:	R2

Substrate preparation

The substrate must be sound, load-bearing and free of substances that could interfere with the adhesion of the mortar (e.g. release agents, infestation with micro-organisms, efflorescence, sanding, etc.). Remove all loose, soft and hollow constituents by mechanical means. The resulting substrate must be sufficiently rough and absorbent to ensure a bond with Betofix R2. If there are deeper broken out areas, the adhesive pull strength of the substrate should be at least 1.5 N/mm².

Exposed steel reinforcement should be prepared to bright metal (SA 2 1/2). Then mix **2 parts by weight Funcosil Betofix R2** with **1.1 parts by weight Remmers Rust Inhibitor M** until a homogeneous brushing consistency has been achieved.

Ratio by volume:
2 parts by volume dispersion
+ 2.5 parts by volume powder.

Coat the entire surface of the steel reinforcement with the freshly mixed grout at least 1 mm thick. Apply a second coat after a waiting time of at least 30 minutes as described for the first coat. After a further 30 minutes, the broken out area can be closed with Funcosil Betofix R2.

Concrete repairs

Mixing:
Pour **4.5 l of water** into a clean container and add **25 kg of Betofix R2**. Mix thoroughly with a mixer/drill and paddle for approx. 3 minutes and the consistency is proper for working. **The quantity of water added for 5 kg is 0.9 litres.** Partial amounts can be mixed in a **ratio of 1 part by volume water to 4.0 parts by volume powder.** **Betofix R2** sets quickly and can be coated over the same day. Mix only the quantity of mortar that can be applied within 20-40 minutes (depending on temperature). **Betofix R2** starts to set during pot-life,

allowing even deep broken out areas to be completely closed in one working operation. When used as a surface filler, **Betofix R2** can be kept smooth within the first 20 minutes without adding more water by stirring.

Closing Broken Out Areas:

Do not pre-wet the concrete substrate before applying Betofix R2. The mortar can be applied to dry or matt damp (not wet) substrates. After mixing, apply **Betofix R2** with a trowel in the desired layer thickness and then smooth. An additional bonding layer is not necessary. After 15-30 minutes the surface can be rubbed fine and smooth with a red sponge float. If necessary, the surface can be finished to match the texture of the surface.

Coatings, fillings:

Apply **Betofix R2** to the dry or matt damp substrate as a filler for pipes or as a coating. The surface is then worked as desired by felting, rubbing, smoothing or texturing.

Notes

Initially set mortar cannot be made workable again by adding fresh mortar or water. Do not use at temperatures below +5 °C. Lower temperatures lengthen; higher temperatures reduce working and setting time. Protect the repaired areas from drying out too quickly in direct sunlight or drafts.

Tools, cleaning

Depending on the work done, mixing equipment, brush, filling knife, stainless steel trowel, red sponge float, plasterer's float. Cleaning: Clean tools and equipment with water while the mortar is still fresh.

Packaging, application rate, shelf-life

Packaging:

25 kg paper bags

Application rate:


Approx. 1.3 kg/m² per mm thick layer

Shelf-life:

At least 12 months stored dry and frost-free in closed bags

Safety, ecology, disposal

Further information on safety when transporting, storing and handling as well as disposal and ecology is found in the latest Safety Data Sheet.

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EN 1504-3 Betofix R2 Cement based concrete repair mortar Fast setting	
Compressive strength	R2
Chloride ion content	≤ 0.05 %
Adhesion capacity	≥ 0.8 MPa
Constrained shrinkage / swelling	≥ 0.8 MPa
Alternating temperature compatibility part 1 and 4	≥ 0.8 MPa
Capillary water absorption	≤ 0.05 kg / m ² · h ^{0.5}
Hazardous substances	conformance 1504-3, 5.4
Behaviour under fire	Euro class E

The statements above are compiled from our field of production and according to the latest technological developments and application techniques.

Since application and working are beyond our control, no liability of the producer can be derived from the contents of this information sheet. Any statements made beyond the contents of this information must be confirmed in writing by the producer.

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