




## KÖSTER Repair Mortar R4

Technical Data Sheet C 536

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### Concrete repair mortar with high chemical and mechanical resistance

 0761	<b>KÖSTER BAUCHEMIE AG</b> Dieselstraße 1-10, 26607 Aurich 19 C 536 EN 1504-3:2005 <b>Concrete repair product for the structural and non-structural renovation; hand mortar application (3.1) EN 1504-3: ZA. 1a</b>																							
	<table border="0"> <tr><td>Compressive strength</td><td>Class R4</td></tr> <tr><td>Chloride ion content</td><td>≤ 0,05 %</td></tr> <tr><td>Adhesive strength</td><td>≥ 2,0 MPa</td></tr> <tr><td>Restrained shrinkage / expansion</td><td>≥ 2,0 MPa</td></tr> <tr><td>Carbonation resistance</td><td>pass</td></tr> <tr><td>Modulus of Elasticity</td><td>≥ 20 GPa</td></tr> <tr><td>Temperature change resistance</td><td>≥ 2,0 MPa</td></tr> <tr><td>Skid resistance</td><td>NPD</td></tr> <tr><td>Capillary water uptake</td><td>NPD</td></tr> <tr><td>Coefficient of thermal expansion</td><td>NPD</td></tr> <tr><td>Dangerous substances</td><td>EN 1504-3, Pkt. 5.4</td></tr> <tr><td>Fire resistance</td><td>Class A1</td></tr> </table>	Compressive strength	Class R4	Chloride ion content	≤ 0,05 %	Adhesive strength	≥ 2,0 MPa	Restrained shrinkage / expansion	≥ 2,0 MPa	Carbonation resistance	pass	Modulus of Elasticity	≥ 20 GPa	Temperature change resistance	≥ 2,0 MPa	Skid resistance	NPD	Capillary water uptake	NPD	Coefficient of thermal expansion	NPD	Dangerous substances	EN 1504-3, Pkt. 5.4	Fire resistance
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restoration mortar as well as for concrete repair in areas with high chemical and mechanical stress, such as agricultural concrete structures or water treatment plants. KÖSTER R4 can also be used for surface leveling of concrete up to a 50 mm layer thickness.

#### Substrate

Damaged and contaminated concrete must be removed down to a solid, fresh, and clean layer. Corroded steel reinforcement must be cleaned down to a grade SA 2 ½ and then be protected with a corrosion protection coating such as KÖSTER Z1 / Z2. The concrete substrate is coated with a bonding bridge made of KÖSTER NB 1 Grey, consumption approx. 2 kg / m<sup>2</sup> with 30 % KÖSTER SB Bonding Emulsion substituted in the mixing water. Highly absorbent and salt burdened substrates are treated with KÖSTER Polysil TG 500 before processing.

#### Application

Each 25 kg bag of KÖSTER R4 is mixed with 2.5 - 3.0 liters of clean water. Fill 2.5 liters of water into a sufficiently large mixing vessel. Add the powder component slowly while constantly mixing with a screed or compulsory mixer. The remaining 0.5 l of water can be added to adjust the consistency. Mix to a homogenous, lump free consistency with a single paddle mortar mixer. The mixing time is 2 minutes.

#### Consumption

approx. 1.9 kg / l void  
approx. 19 kg per m<sup>2</sup> per cm of layer thickness of the plaster

#### Cleaning

Clean tools immediately after use with water.

#### Packaging

C 536 025 25 kg bag

#### Storage

Store the material in a dry environment. In originally sealed packages, the material can be stored for a minimum of 12 months.

#### Safety

Use gloves, goggles, mask, and all Personal Protective Equipment required by governmental, state, and local regulations while processing.

#### Related products

KÖSTER Z 1	Prod. code C 155 001
KÖSTER Z 2	Prod. code C 255 001
KÖSTER PSM	Prod. code C 280 030
KÖSTER Turbo Mortar M	Prod. code C 517 025
KÖSTER Repair Mortar NC	Prod. code C 535 025
KÖSTER Mortar Boost	Prod. code C 791 010
KÖSTER Polysil TG 500	Prod. code M 111

#### Features

KÖSTER R4 is a concrete repair mortar with excellent adhesion on old and new mineral substrates. KÖSTER R4 is distinguished by its high chemical and mechanical resistance. KÖSTER R4 can be used for surface preparation in connection with heavy-duty corrosion protection such as KÖSTER PSM.

#### Technical Data

Recoatable (+ 20 °C) after	approx. 24 Stunden
Compressive strength (1 day, + 20 °C)	> 20 N / mm <sup>2</sup>
Compressive strength (7 days + 20 °C)	> 40 N / mm <sup>2</sup>
Compressive strength (28 days, + 20 °C)	> 50 N / mm <sup>2</sup>
Flexural strength (7 days, + 20 °C)	> 5 N / mm <sup>2</sup>
Flexural strength (28 days, 20 °C)	> 7 N / mm <sup>2</sup>
Minimum processing temperature	+ 5 °C
Maximum air temperature	+ 30 °C
Maximum substrate temperature	+ 40 °C
E-Module	> 15000 N / mm <sup>2</sup>
Density mixed mortar	approx. 2.1 kg / l
Max. grain size	2 mm
Min. layer thickness	3 mm
Max layer thickness (vertical)	5 cm
Pot life (+ 20 °C)	45 min
Water requirement per bag	2.5 - 3.0 l

#### Fields of Application

KÖSTER R4 is suitable for statically relevant concrete repair and restoration measures. The material is particularly suitable as repair and

The information contained in this technical data sheet is based on the results of our research and on our practical experience in the field. All given test data are average values which have been obtained under defined conditions. The proper and thereby effective and successful application of our products is not subject to our control. The installer is responsible for the correct application under consideration of the specific conditions of the construction site and for the final results of the construction process. This may require adjustments to the recommendations given here for standard cases. Specifications made by our employees or representatives which exceed the specifications contained in this technical guideline require written confirmation. The valid standards for testing and installation, technical guidelines, and acknowledged rules of technology have to be adhered to at all times. The warranty can and is therefore only applied to the quality of our products within the scope of our terms and conditions, not however, for their effective and successful application. This guideline has been technically revised; all previous versions are invalid.