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CreNovate
Concrete Repair Mortars.
Versatile and durable
concrete restoration.

About CreNovate Concrete Repair Mortars.

Concrete repair mortars play an important role in the rehabilitation of existing concrete structures. With the use of the individual products of our new CreNovate assortment, various and complex concrete repair works can be done: restoration of damaged or missing concrete cover, filling voids in slabs, walls. Our new CreNovate concrete repair mortars include fine mortars, corrosion protection coatings for embedded steel reinforcing bars, bonding agents for the adequate bonding between the old substrate and the subsequently applied concrete repair mortar, concrete repair mortars for structurally relevant and structurally non-relevant concrete patching, and a highly flowable cementitious grout.

The correct choice of materials is essential for durable and safe concrete repair. Compatibility with the substrate to be repaired is the most important factor for the durability and structural effectiveness of concrete repair mortars.

As a result of continuous development of the national and international regulations, concrete repair mortars can be categorized into different requirement classes for an uncomplicated product choice. To satisfy the different safety aspects such as chemical, dimensional, electrochemical and permeability compatibilities, our CreNovate concrete repair mortar assortment includes 10 different products. The characteristics of the products show differences in the mechanical parameters such as compressive strength, elasticity module, flexural strength, setting time, resistance against various mediums, freeze-thaw resistance, sulphate resistance.

We offer a wide range of cementitious concrete repair mortars to cover diverse applications: from fine mortars to structurally relevant concrete repair mortars, from bonding agents and corrosion protection to cementitious grout. Our products are perfectly matched to each other, guaranteeing a safe and sustainable concrete repair.

1 Fine mortar

2 Concrete repair mortar

3 Bonding agent,
corrosion protection

Product overview.

From fine mortars and cementitious grouts to bonding agents and statically relevant concrete repair mortars.

Fine mortars for a durable and aesthetic surface finish.

Cement based, small-aggregate size (≤ 0.5 mm), polymeric compounds for finishing & plastering and fine-levelling of all types of concrete and cement surfaces. Our assortment includes a universal fibre reinforced fine mortar and a high-sulphate resistant fine mortar, fulfilling the requirement classes R2 and R3 of EN 1504-3 respectively.

FCRM-FM
FCRM-FM SR

Concrete repair mortars, also for statically relevant applications.

Universal concrete repair mortars for statically non-relevant as well for statically relevant concrete repair works; for the reinstitution of damaged and missing concrete parts, to repair damages in concrete walls and to fill concrete cavities. Our products comply with the requirement classes R2, R3 and R4 according to EN 1504-3 respectively and we offer products to fulfill various requirements, such as fast setting time or high sulphate resistance.

FCRM-RM R2
FCRM-RM R3 SR
FCRM-RM R4
FCRM-RM R4 SR
FCRM-RM R4 FS

Corrosion protection for the steel reinforcing bars and bonding agents.

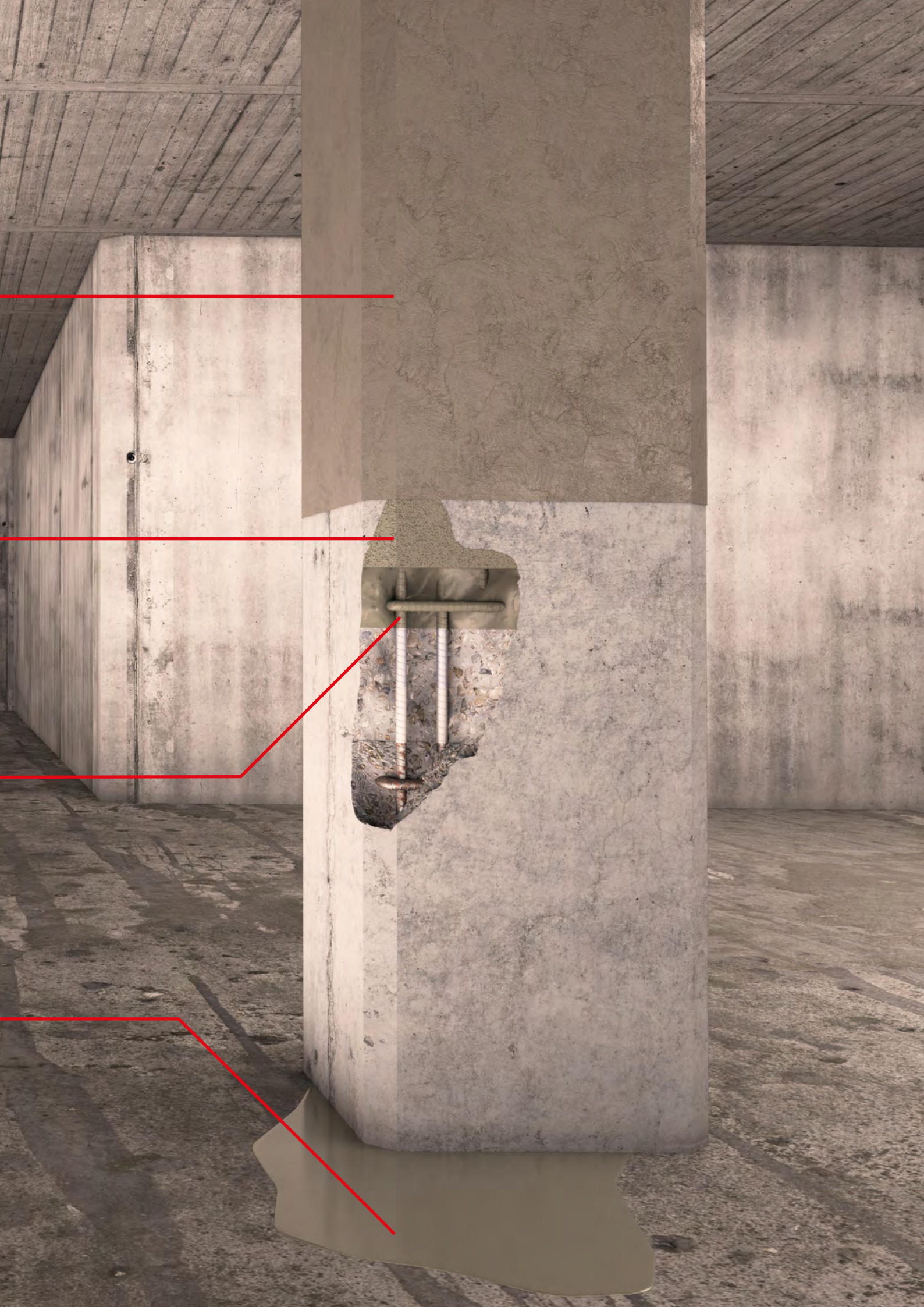
Cementitious, polymer modified, small aggregate size (≤ 1 mm) compounds, to be used on the surface of mineral-based construction materials (e.g. concrete). The primary functions are to achieve an optimal adhesion for subsequent concrete repair mortars, chloride-barrier, and corrosion protection for embedded steel reinforcing bars. We offer two products: a universal bonding agent, and a highly polymer modified, low-chromate content bonding agent with excellent corrosion resistance complying with EN 1504-7.

FCRM-BA SR
FCRM-BA CP

Cementitious grout

Load-bearing, highly flowable, shrinkage-compensated, pumpable cementitious grout for diverse applications such as precision grouting of heavy machinery, load-bearing connection between concrete and machinery.

FCRM-G R4 AR



Fine mortars.

Product range

Fine mortars

FCRM-FM

FCRM-FM SR

Item	Item-No.	Approvals / DoPs	No. of components	Aggregate size [mm]	Colour	Consistency	Delivery form	Sales unit
		EN 1504-3						
FCRM-FM	574214	•	1 (fibre reinforced)	≤ 0.5	Grey	Dry Powder	25 kg Paper bag w. PE-inlay	1
FCRM-FM SR	574215	•	1	≤ 0.5	Grey	Dry Powder	25 kg PE-bag	1

Recommended applications

Item	Main application fields	Application technique	Exposure classes acc. to EN 206 (from outside exposure)
FCRM-FM	· Fibre-reinforced universal fine mortar for smoothing and levelling concrete surfaces · Paintable after 4 h with processing time 45 minutes · Waterproof	Hand application with trowel / spatula, wet-spray application	XF1, XF2, XF3, XF4
FCRM-FM SR	· High sulphate resistant fine mortar for filling concrete cavities and for levelling of concrete surface · Suitable for filling concrete cavities up to 30 mm thickness · Excellent handling in overhead applications	Hand application with trowel / spatula, wet-spray application	XC1, XC2, XC3, XC4 XD1 XS1 XF1, XF2, XF3 XA1 XM1

Technical data – rheological and mixing properties & recommended application thickness

Item	Fresh mortar density [kg/dm³]	Layer thickness [mm]	Mixing water quantity [litre]	Mixing time [min]	Maturing time [min]	Post-mixing time [min]
FCRM-FM	1.7	1–10 (single layer)	5.25–5.75 (25 kg bag)	~ 3	~ 3	~ 1
FCRM-FM SR	1.75	1–10 (single layer) 30 mm in concrete cavities	3.6 (25 kg bag)	~ 2	~ 1	~ 1

Technical data – requirement classes and mechanical properties

Item	Requirement class acc. to EN 1504-3	Compressive strength* (EN 12190) [N/mm²]	Adhesive tensile strength* (EN 1542) [N/mm²]	Flexural strength* (EN 196-1) [N/mm²]	E-Modulus (compression)* (EN 13412) [N/mm²]	Capillary water absorption (EN 13057) [kg /(m² h$^{0.5}$)]
FCRM-FM	R2	≥ 25	≥ 0.8	≥ 6.0	n/a	≤ 0.5
FCRM-FM SR	R3	≥ 30	≥ 1.5	≥ 7.0	≥ 15 000	≤ 0.5

*after 28 days


EN 388

Bonding agent and corrosion protection.

Product range

Bonding agent and corrosion protection

FCRM-BA SR

FCRM-BA CP

Item	Item-No.	Approvals / DoP´s	No. of components	Aggregate size [mm]	Colour	Consistency	Delivery form	Sales unit [pcs]
		EN 1504-7						
FCRM-BA SR	**574212**	•	1	≤ 1.0	Grey	Dry Powder	25 kg PE-Bag	1
FCRM-BA CP	**574213**	•	1	≤ 0.3	Light grey	Dry Powder	15 kg Plastic bucket	1

Recommended applications

Item	Main application fields and main product features	Application technique	Application temperature
FCRM-BA SR	· Universal bonding agent for subsequent concrete repair mortars · Wet-in-wet application with the subsequent concrete repair mortar · Corrosion protection for steel rebars	Hand application with paint brush	5 °C – 30 °C
FCRM-BA CP	· Bonding agent for subsequent concrete repair mortars · Perfect corrosion protection coating for embedded reinforcing steel · Compatible with steel reinforcing bar, concrete and concrete repair mortar · Resealable bucket · Efficient chloride-barrier	Hand application with paint brush	5 °C – 35 °C

Technical data – rheological and mixing properties & recommended application thickness

Item	Fresh mortar density [kg/dm³]	Layer thickness. if used as bonding agent* [mm]	Layer thickness. if used as corrosion protection* [mm]	Mixing water quantity [litre]	Mixing time [min]	Processing time at 20 °C [min]
FCRM-BA SR	~ 1.8	~ 1	~ 2 (two 1 mm layers)	5.0–5.2 (25 kg bag)	~ 3	~ 60
FCRM-BA CP	~ 1.8	~ 1	~ 2 (two 1 mm layers)	2.85–3.00 (15 kg bucket)	~ 3	~ 45

* Note that the actual consumption rate might be dependent on diverse factors

Concrete repair mortars.

Product range

Concrete repair mortars


FCRM-RM R2


FCRM-RM R3 SR


FCRM-RM R4 FS


FCRM-RM R4


FCRM-RM R4 SR

Item	Item-No.	Approvals / DoP´s	No. of components	Max. aggregate size [mm]	Colour	Consistency	Delivery form	Sales unit [pcs]
		EN 1504-3						
FCRM-RM R2	574216	•	1 (fibre reinforced)	≤ 1	Grey	Dry Powder	20 kg Paper bag w. PE-inlay	1
FCRM-RM R3 SR	574217	•	1 (fibre reinforced)	≤ 2	Grey	Dry Powder	25 kg Paper bag w. PE-inlay	1
FCRM-RM R4 FS	574218	•	1 (fibre reinforced)	≤ 2	Grey	Dry Powder	25 kg Paper bag w. PE-inlay	1
FCRM-RM R4	574219	•	1 (fibre reinforced)	≤ 3	Grey	Dry Powder	25 kg Paper bag w. PE-inlay	1
FCRM-RM R4 SR	574220	•	1 (fibre reinforced)	≤ 2	Grey	Dry Powder	25 kg Paper bag w. PE-inlay	1

Recommended applications and exposure classes

Item	Main application fields	Application technique	Exposure classes acc. to EN 206 (from outside exposure)
FCRM-RM R2	· Lightweight, class R2 (EN 1504-3) concrete repair mortar for statically non-relevant applications · Fast-setting mortar, walkable after 4 hours · Reinstitute and repair of damaged concrete edges, concrete spalling areas, filling of concrete cavities	Hand application with spatula / trowel	XF1, XF2, XF3, XF4
FCRM-RM R3 SR	· High-sulphate resistant, class R3 (EN 1504-3) concrete repair mortar for statically relevant applications · Suitable for overhead applications · Low-shrinkage properties	Hand application with spatula / trowel, wet-spray application	XC1, XC2, XC3, XC4 XD1, XD2, XD3 XS1, XS2, XS3 XF1, XF2, XF3, XF4 XA1, XA2, XA3 XM1, XM2
FCRM-RM R4 FS	· Fast-setting, class R4 (EN 1504-3), universal concrete repair mortar for concrete reprofiling · Walkalble after 1 h–2 h	Hand application with spatula / trowel	XC1, XC2, XC3, XC4 XD1, XD2, XD3 XS1, XS2, XS3 XF1, XF2, XF3, XF4 XA1, XA2
FCRM-RM R4	· Universal, fibre-reinforced, class R4 (EN 1504-3), concrete repair mortar for statically relevant concrete patching with active corrosion protection · 2 in 1 product: concrete repair mortar and bonding agent · Suitable for overhead application · Chloride- and chromate-free	Hand application with spatula / trowel, wet spray application	XC1, XC2, XC3, XC4 XD1, XD2, XD3 XS1, XS2, XS3 XF1, XF2, XF3, XF4 XA1, XA2 XM1
FCRM-RM R4 SR	· High sulphate resistant, class R4 (EN 1504-3) universal concrete repair mortar for concrete reprofiling and concrete patching · High E-Modulus ≥ 25 000 N/mm² · Suitable for drinking water contact	Hand application with spatula / trowel, wet-spray application	XC1, XC2, XC3, XC4 XD1, XD2, XD3 XS1, XS2, XS3 XF1, XF2, XF3, XF4 XA1, XA2, XA3 XM1, XM2

Technical data – rheological and mixing properties & recommended application thickness

Item	Fresh mortar density [kg/dm³]	Application thickness [mm]	Mixing water quantity [litre]	Mixing time [min]	Maturing time [min]	Post-mixing time [min]
FCRM-RM R2	1.8	3–30 (on surface) ≤ 100 (in cavities)	~ 3.3–4.0 (20 kg bag) if used as concrete repair 0.19–0.22 litre (1 kg) if used as bonding agent	3	2	1
FCRM-RM R3 SR	2.0	5–20 (1 layer) ≤ 40 (2 layers) ≤ 70 (in cavities)	~ 2.8 (25 kg bag)	3	1	1
FCRM-RM R4	2.2	5–50 ≤ 100 (in cavities)	~ 3.5–3.7 (25 kg bag) if used as concrete repair ~ 0.14–0.15 litre (1 kg) if used as bonding agent	3	3	1
FCRM-RM R4 FS	2.2	5–50	~ 3.3–3.5 (25 kg bag) if used as concrete repair ~ 0.15 litre (1 kg) if used as bonding agent	3	3	1
FCRM-RM R4 SR	2.0	5–25 (1 layer) ≤ 50 (2 layers) ≤ 80 (in cavities)	~ 2.7 (25 kg bag)	3	1	1

Technical data – requirement classes and mechanical properties

Item	Requirement class acc. to EN 1504-3	Compressive strength (EN 12190) [N/mm²]	Adhesive tensile strength* (EN 1542) [N/mm²]	E-Modulus (compression)* (EN 13412) [N/mm²]	Capillary water absorption (EN 13057) [kg /(m² $h^{0.5}$)]
FCRM-RM R2	R2	≥ 25 (28 days)	≥ 0.8	–	≤ 0.5
FCRM-RM R3 SR	R3	≥ 30 (28 days)	≥ 1.5	≥ 15 000	≤ 0.5
FCRM-RM R4	R4	≥ 50 (28 days)	≥ 2.0	≥ 20 000	≤ 0.5
FCRM-RM R4 FS	R4	≥ 20 (2 hours) ≥ 60 (28 days)	≥ 2.0	≥ 20 000	≤ 0.5
FCRM-RM R4 SR	R4	≥ 50 (28 days)	≥ 2.0	≥ 25 000	≤ 0.5

* after 28 days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Cementitious grout.

Product range

Grout

FCRM-G R4 AR

Item	Item-No.	Approvals / DoP´s	No. of components	Aggregate size [mm]	Colour	Consistency	Delivery form	Sales unit [pcs]
		EN 1504-3 /-6						
FCRM-G R4 AR	**574223**	• / •	1	≤ 1	Grey	Dry Powder	25 kg paper bag with PE-inlay	1

Recommended applications and exposure classes

Item	Main application fields	Application technique	Exposure classes acc. to EN 206 (from outside exposure)
FCRM-G R4 AR	· Self-levelling, class R4 (EN 1504-3) cementitious grout for statically relevant applications with very high flowability (F3 consistency class acc.to DAfStb RL) · Void-free and load-bearing connection between concrete substrate and machines as well as other metal components · Chloride-free and water-tight · Early strength development (Class A)	Pouring	XC1, XC2, XC3, XC4 XD1, XD2, XD3 XS1, XS2, XS3 XF1, XF2, XF3 XA1, XA2

Technical data – rheological and mixing properties & recommended application thickness

Item	Fresh mortar density [kg/dm³]	Application thickness / Grouting height [mm]	Mixing water quantity [litre]	Mixing time [min]	Slump flow spread [mm]
FCRM-G R4 AR	2,3	5–100	~ 3,6 (25 kg bag)	3	≥ 800 (5 min) ≥ 800 (30 min) ≥ 780 (60 min)

Technical data – requirement classes and mechanical properties

Item	Requirement class acc. to EN 1504-3	Compressive strength (EN 12190) [N/mm²]	Flexural strength (EN 196-1) [N/mm²]	E-Modulus (compression)* (EN 13412) [N/mm²]	Capillary water absorption (EN 13057) [kg/(m² h$^{0.5}$)]
FCRM-G R4 AR	R4	≥ 55 (1 day) ≥ 80 (7 days) ≥ 90 (28 days)	≥ 10 (7 days) ≥ 10 (28 days)	≥ 20 000	≤ 0.5

* after 28 days

Durability of concrete repair.

From the correct choice for successful concrete repair ...

Concrete repair mortars should fulfil several requirements to ensure the successful concrete repair and planners should carefully select the suitable product. To ensure compatibility in diverse applications, we offer a wide range of products for the best results.

The compatibility of the repair mortar and the old concrete is of particular importance in all aspects – chemical, electrochemical, permeability and dimensional compatibility.

Different material properties influence the dimensional compatibility, such as shrinkage properties, thermal expansion, modulus of elasticity and creep. The thermal coefficient of expansion of the repair mortar should be close or equal to that of the old concrete to avoid shear stresses at the old-concrete and repair mortar interface. The mechanical compatibility should also be taken into account by the designer. For example, the modulus of elasticity under compression should also be compatible with that of the old concrete to avoid stress peaks either in the old concrete or in the hardened concrete repair mortar. In case of different compressive elasticity modulus, shear stresses develop. Our concrete repair mortars are very low-shrinkage mortars to avoid volume instability during curing.

We are looking forward to your project inquiry and technical questions.

... to the perfect handling at construction sites.

Besides the considerations regarding design and material requirements, we put great emphasis on the handling of our products to ensure the easy installation. With respect to the product type and application, our materials are optimized for application by using brush, spatula or concrete spray machine.

Application technique				
Fine mortars				
FCRM-FM	–	•	•	–
FCRM-FM SR	–	•	•	–
Bonding agent & corrosion protection				
FCRM-BA SR	•	–	–	–
FCRM-BA CP	•	–	–	–
Concrete repair mortars				
FCRM-RM R2	–	•	–	–
FCRM-RM R3 SR	–	•	•	–
FCRM-RM R4	–	•	•	–
FCRM-RM R4 SR	–	•	•	–
FCRM-RM R4 FS	–	•	-	–
Cementitious grout				
FCRM-G R4 AR	–	–	–	•

Sales Organisation:

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fischer stands for

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575242 · 49/2024 · C-BS · Printed in Germany · Subject to technical changes.