REPAIR MORTAR

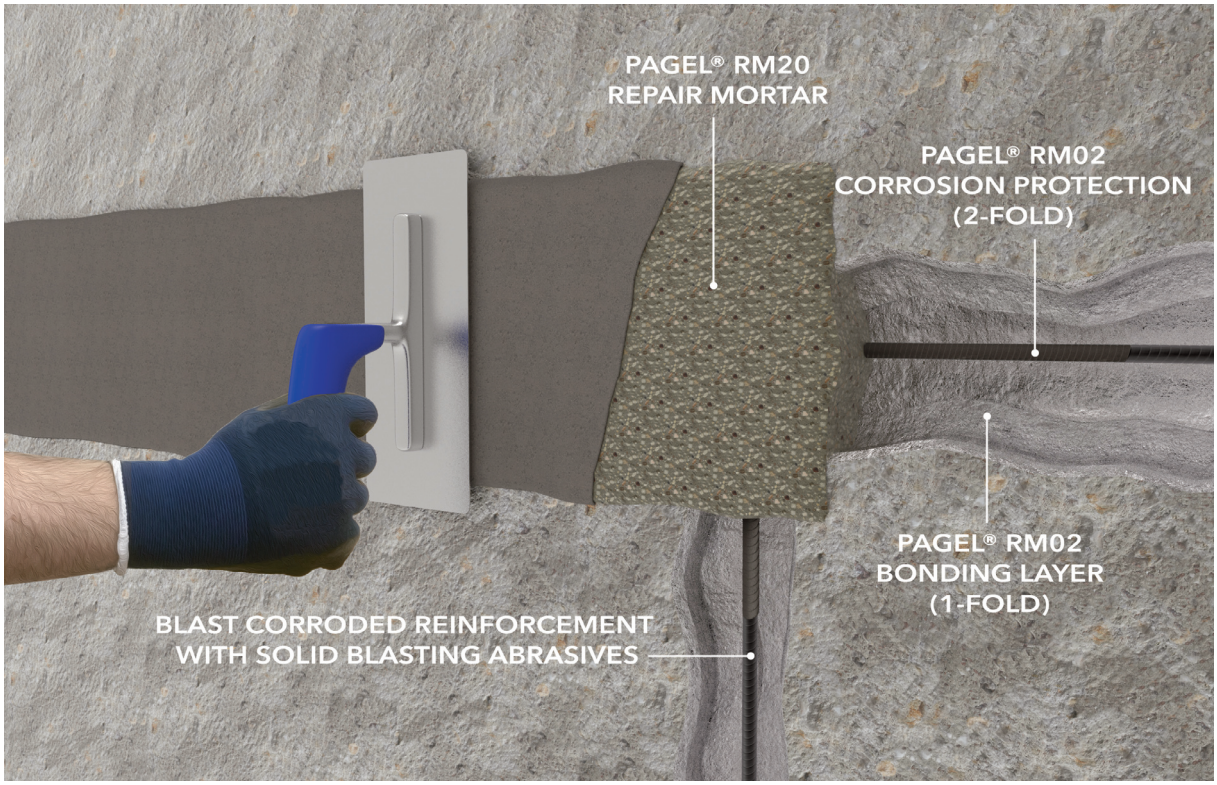
RM20 (PCC, RM) REPAIR MORTAR

TEST CERTIFICATES AND SUPPORTING DOCUMENTS

› PCC and RM concrete replacement system acc. to
  – ZTV-ING Part 3, Section 4
  – DAfStb-directive protection and repair of concrete structures (RL SIB)
  – DIN EN 1504-3 „for statically and non statically relevant applications"
› Verifications of applicability: general building inspection test certificate (abP)
› Non-combustible – Verification with a test for the classification according to building material class A1 according to DIN EN 13501-1
› Factory production control acc. to DIN EN 1504-3
› Confirmation of the voluntary external monitoring by the QDB
› Company certification acc. to DIN EN ISO 9001:2015

APPLICATION EXAMPLE:

Concrete repair with **RM20** (PCC, RM) repair mortar



PROPERTIES

› Ready to use, cement-bound repair mortar
› Only requires mixing with water
› Can be processed by hand application
› Soft plastic processing consistency with very good stability on vertical and overhead surfaces
› High inhibiting carbonisation - reduces the ingressing of CO_2 and moist
› Usually sealed against the penetration of water and oil

SYSTEM COMPONENTS

RM02 Corrosion protection and bonding agent
RM20 Repair Mortar
MS05 PCC-Screed

AREAS OF APPLICATION

› Repair of concrete, prestressed concrete and reinforced concrete constructions
› Reprofiling of bridge decks for the application of sealing sheets or systems even with a hot application
› Areas of application PCC I and PCC II according to ZTV-ING
› Gradient compensation at bridge decks
› Slope coating at mast foundations
› Repair of concrete in the sea and inland waterways department of the BAW (Federal Waterways Engineering and Research Institute) ZTV-W LB 219 (PCC)

MOISTURE CLASSES BASED ON CONCRETE CORROSION FROM ALKALI-SILICIC ACID REACTIONS

Moisture class	WO	WF	WA	WS
RM20	•	•	•	•

The aggregates in PAGEL®'s products comply with the requirements of alkali sensitivity class E1 from nonhazardous sources specified under DIN EN 12620.

EXPOSURE CLASS ALLOCATION ACC. TO: DIN EN 206-1 / DIN 1045-2

	XO	XC	XD	XS	XF	XA*	XM	XW	XALL	XDYN	XBW
		1 2 3 4	1 2 3	1 2 3	1 2 3 4	1 2 3	1 2 3	1 2			1 2
RM20	•	• • • •	• • •	• • •	• • • •	• •	• •	• •	•	•	• •

* Having sulfate attack up to 600 mg/l

TECHNICAL DATA

TYPE			RM20 (PCC, RM)
Grain size		mm	0–2
Amount of water	max.	%	12
Processing time approx.	20 °C	min	45
Consumption approx.		kg/(m² · mm)	1.85
Fresh mortar raw density approx.		kg/m³	2,200
Layer thickness (in total, 2 layers)		mm	10–60**
Compressive strength*	24 h	N/mm²	≥ 30
	7 d	N/mm²	≥ 40
	28 d	N/mm²	≥ 50
Bending tensile strength	24 h	N/mm²	≥ 4
	7 d	N/mm²	≥ 5
	28 d	N/mm²	≥ 8
Adhesive pull strength	7 d	N/mm²	≥ 2
Classification according to EN 1504-3			R4

* DIN EN 196-1-compliant compressive strength testing; DAfStb directive IH storage B
** Permissible overall layer thickness acc. to ZTV-ING 50 mm

Note: All fresh and solid mortars are tested at 20 °C ± 2 °C.
Higher or lower temperatures result in deviating properties of fresh respectively solid mortars and test results.
Depending on the temperature, the consistency can be adapted with a slight reduction of the mixing water.

Storage: 12 months. Cool, dry, free from frost. Unopened in its original container.
Delivery form: 25-kg bag, Euro pallet 1.000 kg
Hazard class: Non-hazardous material, observe information on packaging.
GISCODE: ZP1

PAGEL® PRODUCT COMPOSITION:
Cement: acc. to DIN EN 197-1
Aggregate: acc. to DIN EN 12620
Additions: acc. to DIN EN 450, general building inspection approval (abZ), DIN EN 13263 (fly ash, microsilica, etc.)

PROCESSING

SUBSTRATE PREPARATION:
Remove loose and unsound material such as cement slurry and dirt etc. using suitable methods, e.g. shot-blasting or similar until the underlying solid grain structure has been exposed. A sufficient average tear strength (≥ 1.5 N/mm², KEW ≥ 1.0 N/mm²) must be ensured.

Prewetting:
Prewet the concrete substrate to capillary saturation for approx. 6-24 hours.

Reinforced concrete:
The grade of surface preparation of reinforcement as well as other metallic parts is based on the requirements of the current applicable regulations and must be ensured before the application.

Non-iron metals:
Cement and cement-bound building materials may cause non-iron-metals in the transitional area of the contact surface (e.g. aluminium, copper, zinc) to loosen. Please contact us for technical advice.

MIXING:
The dry mortar is supplied ready to use and only needs to be mixed with water. Fill the specified amount of water apart from a residual amount into a clean and suitable mixing device (e.g. compulsory mixer).
Add the dry mortar and mix for at least 3 minutes. Add the remaining water and mix for at least another 2 minutes until it forms a homogeneous mass.

Mixing water:
Drinking water quality

Temperature range:
+5 °C to + 35 °C

Low temperatures and cold mixing water reduce strength development, require intensive forced mixing and reduce flowability. Higher temperatures accelerate strength development and can also reduce the flowability.

APPLICATION:
Corrosion protection:
If necessary, apply two layers of **RM02** Corrosion Protection and Bonding Agent seamlessly to exposed and prepared reinforcement. Follow the technical data sheet.

Manual processing:
Use a brush or broom and brush **RM02** onto the pre-wetted, slightly moist concrete substrate until it has penetrated right down into the pores and without leaving any gaps. The subsequent mortar coating must be applied wet-on-wet.
Apply **RM20** repair mortar PCC compressively to the bonding layer before it starts setting using conventional tools, distribute and smoothen.

FOLLOW-UP TREATMENT:
Exposed grout areas must be protected from premature water evaporation (from wind, draughts, direct exposure to sun, etc.) immediately on completion of the work for a period of 3-5 days.

Suitable curing methods:
Water spray, foil covers with jute sheets, thermofoils or moisture-retaining covering sheets, **O1** Evaporation protection.

The technical data sheet must be observed when using **O1** Evaporation protection.

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