

PAGEL[®]

SPEZIAL-BETON



R20

RAPID REPAIR MORTAR



- A mortar suitable for use throughout the entire year
- One product – One system
- Repair mortar as specified by DIN EN 1504-3
- Can be applied at temperatures as low as 1 °C
- Ready for bearing loads within 2 hours when applied at 5 °C
- Suitable for use on walls and floors
- Suitable for sewer repairs

*Supplying quality mortars
.....across the globe!*

R20 PAGEL-RAPID REPAIR MORTAR SYSTEM

PRODUCTS

- **R20/02 PAGEL-RAPID FINEGRAIN REPAIR PUTTY** (0–0,2 mm)
- **R20/05 PAGEL-RAPID REPAIR PUTTY** (0–0,5 mm)
- **R20/10 PAGEL-RAPID REPAIR MORTAR** (0–1,0 mm)
- **R20/20 PAGEL-RAPID REPAIR MORTAR** (0–2,0 mm)
- **R20/40 PAGEL-RAPID REPAIR MORTAR** (0–4,0 mm)
- **R20/80 PAGEL-RAPID REPAIR MORTAR** (0–8,0 mm)



PROPERTIES

- Durable solution for urgent repairs
- Can be applied at temperatures as low as 1 °C
- Ready for bearing loads within 2 hours when applied at 5 °C
- Supplied ready for use and easy to apply
- Polymer-modified, inhibits corrosion
- Free from chloride and alumina cement
- Frost and road-salt resistant
- Residual moisture content after 24 h < 4 % and < 3 % after 3 days
- Frost resistant after 8 hours (5 °C)
- Building material class A1 (non-combustible) as specified by EN 13501 and DIN 4102



FIELDS OF APPLICATION

- Suitable for small-scale cosmetic and restorative work (**R20/02, R20/05**)
- Suitable for urgent repairs
- Suitable for use on concrete and mortar substrates
- Suitable for application to walls and floors
- Suitable for restoring shafts
- Suitable for use in industrial facilities, on ramps, garages
- Suitable for repairing and restoring concrete
- Suitable for repairing broken areas, holes, edges
- Suitable for repairing the inside of sewers

PROCESSING

SUBSURFACE: Clean thoroughly; remove all loose objects and objects that might prevent adhesion, as well as cement slurries, using blasting or similar. The substrate must have an adequate pull-off strength (1.5 N/mm²), roughness and load bearing capacity. **Moisten to saturation before application!**

Remove all rust from any exposed reinforcing steel (Sa 2 1/2 in accordance with DIN 55928, Part 4) and coat with **MS02 PAGEL CORROSION PROTECTION** without leaving any gaps.

Concrete layers thicker than 10 mm and that are subsequently covered with putty (**R20/05**) and OS/(**O2C**) do not require any corrosion protection.

BONDING LAYER: Mix small quantities of **R20/10 PAGEL RAPID REPAIR MORTAR** to create a slurry with a water content of no more than 13 % and brush deep into cavities and pores.

MIXING: Pour all of the water, with the exception of a small amount, into a compulsory mixer. Add the dry mortar and mix. Add the remaining water and mix again. Mix for a total of at least 5 minutes.

APPLICATION: Once mixed to a plastic consistency, apply the **R20 PAGEL RAPID REPAIR MORTAR** in one go to the bonding layer before it has had a chance to set and smooth after an appropriate waiting period. Always make sure to keep the application tools wet!



APPLICATION TIME: **R20 PAGEL RAPID REPAIR MORTAR** is designed to start setting after approx. 15 minutes when applied at 20 °C. It is ready for smoothing after just a short time.

CAUTION: Protect the repaired surface against wind, drafts and premature water evaporation using, e.g. sheeting, for 3-5 days after application. The supplementary information provided in the Technical Data Sheet **O1 PAGEL EVAPORATION PROTECTION** must also be taken into consideration if exposed to direct sunlight or wind.



R20 PAGEL-RAPID REPAIR MORTAR SYSTEM

TECHNICAL DATA

TYPE (Putty)		R20/02	R20/05
Particle size	mm	0–0.2	0–0.5
Layer thickness	mm	0.5–5	2–6
Amount of water	%	max. 18	14–16
Consumption	kg/dm ³	app. 1.9	app. 1.8
Starts setting after	20°C min.	app. 15	app. 15
Density of freshly mixed mortar	kg/dm ³	app. 2.15	app. 2.1
Compressive strength*	2 h	N/mm ² ≥ 5	≥ 5
	4 h	N/mm ² ≥ 6	≥ 10
	8 h	N/mm ² ≥ 10	≥ 13
	1 d	N/mm ² ≥ 15	≥ 20
	7 d	N/mm ² ≥ 30	≥ 40
	28 d	N/mm ² ≥ 50	≥ 50
Adhesive tensile strength	28 d	N/mm ² ≥ 2	≥ 2

Note: All test data are guide values only. All testing is performed at our main German production facilities. The values obtained at other production sites can vary.



TYPE (Mortar)		R20/10	R20/20	R20/40	R20/80
Particle size	mm	0–1.0	0–2.0	0–4.0	0–8.0
Layer thickness	mm	3–20	5–40	20–50	30–100
Amount of water	%	11–13	11–12	11–12	11–12
Consumption	kg/dm ³	app. 1.9	app. 2.0	app. 2.0	app. 2.0
Starts setting after	20°C min.	app. 15	app. 15	app. 15	app. 15
Density of freshly mixed mortar	kg/dm ³	app. 2.19	app. 2.23	app. 2.2	app. 2.23
Compressive strength*	2 h	N/mm ² ≥ 5	≥ 5	≥ 5	≥ 5
	4 h	N/mm ² ≥ 10	≥ 10	≥ 10	≥ 10
	8 h	N/mm ² ≥ 15	≥ 15	≥ 15	≥ 15
	1 d	N/mm ² ≥ 20	≥ 25	≥ 25	≥ 25
	7 d	N/mm ² ≥ 40	≥ 40	≥ 45	≥ 40
	28 d	N/mm ² ≥ 55	≥ 55	≥ 55	≥ 55
Adhesive tensile strength	28 d	N/mm ² ≥ 2	≥ 2	≥ 2	≥ 2

* DIN EN 196-1-compliant compressive strength testing
DIN EN 12390-3-compliant compressive strength testing

Note: All test data are guide values only. All testing is performed at our main German production facilities. The values obtained at other production sites can vary.

Storage: 6 months. Cool, dry, frost-free. In originally sealed containers.

Packaging: 25-kg bag

Hazard class: Non-hazardous material, please see safety data sheet

GISCODE: ZP1

CE	
0921	
PAGEL® SPEZIAL-BETON GmbH & Co. KG, D-45355 Essen	
find the printed batch number	
0921 - BPR - 2034	
EN 1504-3:2005	
R20 PAGEL® - RAPID REPAIR MORTAR	
Mortar for statically and not statically relevant repairs (on the basis of hydraulic cement)	
Product name:	R20/02 R20/05 R20/10 R20/20 R20/40 R20/80
Class	R3 R4
Compressive strength	≥ 25 MPa ≥ 45 MPa
Chlorion content	≤ 0.05 % ≤ 0.05 %
Adhesion	≥ 1.5 MPa ≥ 2.0 MPa
Prevented shrinkage/swelling	≥ 1.5 MPa ≥ 2.0 MPa
Resistance to carbonation	NPD NPD
Modulus of elasticity	≥ 15 GPa ≥ 20 GPa
Temperature variation tolerance	NPD
Grip	NPD
Thermal expansion coefficient	NPD
Capillary water absorption	NPD
Reaction to fire	Class A1
Hazardous Substance	In accordance with EN 1504-3:2005, 5.4

NPD: „No Performance Determined“

CE	
PAGEL® SPEZIAL-BETON GmbH & Co. KG, D-45355 Essen	
find the printed batch number	
EN 13813	
PAGEL® - RAPID REPAIR MORTAR	
Cement based screed	
Product name:	R20/10 R20/20 R20/40 R20/80
Reaction to fire	Afl Afl Afl Afl
Compressive strength	C60 C60 C60 C60
Bending strength	F10 F10 F10 F7
Release of corrosive substances	CT CT CT CT
Water permeability	NPD
Wear resistance	A12 A12 A9 A9
Sound insulation	NPD
Sound absorption	NPD
Thermal insulation	NPD
Resistance to chemicals	NPD

NPD: „No Performance Determined“

Exposition category according to:

DIN 1045-2 / EN 206-1

PAGEL - RAPID REPAIR MORTAR

	XO	XC	XD	XS	XF	XA	XM
	0	1 2 3 4	1 2 3	1 2 3	1 2 3 4	1 2 3	1 2 3
R20/02	•	• • • • •	• •	• •	• •	• •	• •
R20/05	•	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •
R20/10	•	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •
R20/20	•	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •
R20/40	•	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •
R20/80	•	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •	• • • • •

R20/02 - R20/80	R20/10 - R20/20	R20/40	R20/80
 0921 PAGEL® Spezial-Beton Spezialbeton auf B 45355 Essen find the printed batch number 0921 - BPR - 2034 EN 1504-3	 PAGEL® Spezial-Beton Spezialbeton auf B 45355 Essen find the printed batch number CT C60 F10 A12 EN 13813	 PAGEL® Spezial-Beton Spezialbeton auf B 45355 Essen find the printed batch number CT C60 F10 A9 EN 13813	 PAGEL® Spezial-Beton Spezialbeton auf B 45355 Essen find the printed batch number CT C60 F7 A9 EN 13813



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They are, however, without liability on our part, in particular with regard to third parties proprietary rights, and do not relieve the user of the responsibility for verifying that the products and processes are suitable for the intended application.

The data presented was derived from tests under normal climate conditions according to DIN 50014 and mean average values and analysis.

Deviations are possible when delivery takes place.

Given that recommendations may differ from those shown in this leaflet written confirmation should be sought. It is the responsibility of the purchaser to ensure they have the latest leaflet issue and that its contents are current.

Our customer service staff will be glad to provide assistance at any time.

We appreciate the interest you have shown in our products.

This technical data sheet supersedes previously issued information.

Please find the latest leaflet issues at www.pagel.com.

Technical information sheet 0802 QS-Formblatt 05.12 Rev. 01