CHANNEL MORTAR

KA20 CHANNEL MORTAR (0-2 mm)

TEST CERTIFICATES AND SUPPORTING DOCUMENTS

› Product acc. to DIN EN 1504-3 “Concrete replacement product for statically relevant and irrelevant repair”
› Product acc. to DIN EN 13813 "Cement-based screeds for wearing layers"
› Corrosion resistance against strong chemical attack - Verification by testing acc. to DIN 19573
› High sulfate resistance – verification by testing according to DIN 19573
› Verification of a lower overall porosity according to DIN 66133
› Factory production control acc. to DIN EN 1504-3 and DIN EN 13813
› Company certification acc. to DIN EN ISO 9001:2015

PROPERTIES

› Ready to use cement-bound mortar, only requires mixing with water
› For the partial and extensive repair of concrete
› Suitable for manual application to both vertical and overhead surfaces as well as horizontal substrates
› Can be sprayed onto vertical and overhead surfaces
› Highly resistant in part even to strong chemical attack
› Largely resistant to sulfate attack (industry) and ammonium attack (agriculture)
› Ready to use
› Pumpable
› Complies with the requirements of building material class A1 (non-combustible) as specified under decision 2000/605/EC of the European Commission dated September 26, 2000 (published in the official journal L258)

AREAS OF APPLICATION

For coating and repairing:

› Sewage treatment plants
› Waste water collectors
› Grouting of masonry joints
› Waste water drainage systems
› Areas subject to high chemical loads
› Sulfate-polluted groundwater and foundation engineering areas
› Rainwater overflow tanks
› Collecting basins
› Shaft construction
› Coatings for accessible channels
› Levelling layers in the channel, at the wall, the floor and the ceiling
› Floor renovation

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

Moisture class	WO	WF	WA	WS
KA20	•	•	•	•

The aggregates in PAGEL®'s products comply with the requirements of alkali sensitivity class E1 from non-hazardous 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		
		1	2	3	4	1	2	3	1	2	3	1	2	3	4	1	2	3*	1	2	3
KA20	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•		

* Classification of the sulfate resistance according to DIN 19573

TECHNICAL DATA

TYPE			KA20
Grain size		mm	0–2
Layer thickness		mm	6–40
Amount of water	max.	%	12
Fresh mortar raw density approx.		kg/m³	2,200
Consumption approx.		kg/(m² · mm)	1.9
Processing time approx.	+ 20 °C	min	45
Swelling	24 h	Vol.-%	≥ 0.1
Compressive strength*	1 d	N/mm²	≥ 30
	7 d	N/mm²	≥ 40
	28 d	N/mm²	≥ 50
Bending tensile strength*	1 d	N/mm²	≥ 3
	7 d	N/mm²	≥ 5
	28 d	N/mm²	≥ 8
Adhesive pull strength	7 d	N/mm²	≥ 2.0

* Testing of bending tensile and compressive strength in accordance with DIN EN 196-1

Note: All fresh and solid mortars are tested at 20 °C ± 2. 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 palette 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.)

APPLICATION

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.

Reinforcing steel:
Blast all rust off exposed reinforcement bars until the underlying metal has been exposed acc. to purity grade SA 2 ½ in accordance with DIN EN ISO 12944-4.

CORROSION PROTECTION:
Apply two complete coats of **RM02** CORROSION PROTECTION using a brush.

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.

APPLICATION:

Manual application:

BONDING LAYER: Mix **KA20** as bonding layer in small quantities with a max. of 13 % water and apply it with a brush onto the surface deep into the pores. The subsequent mortar coating must be applied wet-on-wet.
Apply **KA20** compressively to the bonding layer before it starts setting using conventional tools, distribute and smoothen.

Mechanical application:

KA20 in the MAWO-PAGEL DENSE PHASE WET SPRAYING APPLICATION METHOD:
The spraying of the mortar can be carried out with conventional screw feed pumps with a variable speed drive suitable for this application. Hold the nozzle preferably at a right angle with a distance of approx. 50 cm to the area to be coated. The first layer of spray mortar is sprayed on with a high compressed air flow to support the bonding layer.
The application of the additional spray layers is carried out with a conveying speed correspondingly adapted to the position of the respective structural component and adapted compressed air support.
The post processing and the smoothing of the surfaces can be carried out immediately after the completion of the spray works.

Air compressor:	5 m³/min, 5 bar
Temperature range:	+ 5 °C to + 35 °C
Mixing water:	Drinking water quality

FOLLOW-UP TREATMENT:
Fresh mortar 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.

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