

## PAGEL®-GROUT

### PROPERTIES

- **V10** (0-1 mm) grout
- **V40** (0-4 mm) grout
- **V80** (0-8 mm) grout
- ready for use, just water to be added
- does not shrink, controlled and even expansion
- as occasion demands plastic to liquid consistency
- rigid bond between foundation and steel and/or concrete unit
- resistant to freeze/thaw cycles, waterproof, to quite some extent resistant to oil and petrol
- pumpable and easy to pour – even when having low temperatures
- **company is certified according DIN EN ISO 9001:2008**

### FIELDS OF APPLICATION

- universal-grout for grouting and boxing up machines
- concrete repairs
- turbines, generators, compressors, diesel engines and other power equipment operating under heavy vibration
- anchor screws, levelling units and sole plates
- steel and concrete columns
- prefabricated concrete units and structural steelworks
- high shelf store columns
- grouting of rails

**V10**

**V40**

**V80**

Assigning to expositioncategory according to:  
DIN 1045-2 / EN 206-1  
PAGEL – GROUT

	XO 0	XC 1 2 3 4	XD 1 2 3	XS 1 2 3	XF 1 2 3 4	XA 1 2 3	XM 1 2 3
<b>V10</b>	•	••••	•••	•••	•••••	••	•
<b>V40</b>	•	••••	•••	•••	•••••	••	•
<b>V80</b>	•	••••	•••	•••	•••••	••	•

<b>CE</b>	
0921	
PAGEL SPEZIAL-BETON GMBH & CO.KG Wolfsbankring 9 45355 Essen, Germany 10 190104 EN 1504-6:2006 V40 PAGEL Grout Anchoring product	
Pull-out	≤ 0.6 mm
Chloride ion content	≤ 0.05 %
Reaction to fire	A1

Moisture class based on concrete erosion from alkali silicic acid reactions				
moisture class	WO	WF	WA	WS
	dry	wet	wet • external supply of alkalis	wet • external supply of alkalis • subject to high levels of dynamic stress
<b>GROUT</b>	•	•	•	•

Die Gesteinskörnungen der PAGEL-Produkte entsprechen nach DIN EN 12620 der Alkaliempfindlichkeitsklasse E1 aus unbedenklichen Vorkommen.



V10

V40

V80

## TECHNICAL DATA

TYPE			V10	V40	V80
grain size	mm		0-1	0-4	0-8
grouting height	mm		5-30	20-100	80-200
amount of water	%		16	12	10
material needed	kg/dm <sup>3</sup>		app. 1.9	app. 2.1	app. 2.2
density of freshly mixed mortar	kg/dm <sup>3</sup>		app. 2.2	app. 2.3	app. 2.3
workability (20 °C)	min.		app. 60	app. 60	app. 60
flowability (channel)	5 min.	cm	≥ 65	≥ 65	-
	30 min.	cm	≥ 55	≥ 55	-
measure of extension	5 min.	cm	-	-	≥ 62
	30 min.	cm	-	-	≥ 55
expansion	24 h	Vol. %	+ 0.5	+ 0.5	+ 0.5
compressive strength	24 h	N/mm <sup>2</sup>	≥ 25	≥ 25	≥ 25
	7 d	N/mm <sup>2</sup>	≥ 50	≥ 50	≥ 50
	28 d	N/mm <sup>2</sup>	≥ 65	≥ 65	≥ 65
bending strength	24 h	N/mm <sup>2</sup>	≥ 4	≥ 4	-
	7 d	N/mm <sup>2</sup>	≥ 7	≥ 7	-
	28 d	N/mm <sup>2</sup>	≥ 8	≥ 8	-

All test data are guide values, proofed in our German manufacturing plants, - values from other manufacturing plants may vary.

\* DIN EN 196-1-compliant compressive strength testing; DIN EN 12390-3-compliant compressive strength testing  
All of the test values provided correspond to DafStb VeBMR – Directive

**storage:** 12 months. Cool, dry, free from frost.  
Unopened in its original packaging.

**packaging:** 25-kg-bag, euro-pallet 1,000 kg

**hazard class:** no dangerous substance  
follow safety data sheet

**giscode:** ZP1

## PAGEL GROUT

cement: DIN EN 197-1 compliant

aggregates: EN 12620 compliant

additives: EN 450, AbZ, EN13263 compliant  
(quick ash, microsilica etc.)

additional substances: DIN EN 934-4 compliant

## PROCESSING

**SUBSTRATE:** Clean thoroughly, free of loose and un-sound material, remove any cement slurry by means of hydraulic water-blasting or similar till carrying capacity of grain structure is reached. Sufficient adhesion must be granted (i. m.  $\geq 1.5$  N/mm<sup>2</sup>). Prior to grouting, the surface must be wetted continuously for approx. 6 hours till saturation.

**FORMWORK:** Must be of rigid construction, with sand or dry mortar being placed around the concrete base carefully to prevent leakage.

**MIXING:** The grout is ready for use, only water is to be added. Measure out the correct quantity of water and fill two thirds of this into a concrete mixer, add the dry mortar and mix for about 3 minutes. Then fill in the remaining water and mix for another 2 minutes. Grouting then should take place immediately.

**GROUTING:** Place the mixed grout from one side or corner only in one continuous pour. When grouting large areas we suggest to pour starting from the middle – using a pipe or funnel. When installing machines fill the anchor bolt pockets first (up to approximately top of anchor bolt pockets) and then the underside of the machine. Potlife: approx. 120 min.

**CAUTION:** Exposed areas must be protected against wind, draught and premature evaporation by using for example plastic foil or **O1 PAGEL-CURING AGENT**. Heights and shoulders around base plates must not exceed 50 mm. In the event of frost, please contact our Technical Department. Low temperature working conditions retard the strength development and reduce the flowability while high temperatures accelerate the same.

The information provided in this leaflet, is supplied by our consulting service and is the end result of exhaustive research work and extensive experience. 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 supercedes previously issued information. Please find the latest leaflet issues at [www.pagel.com](http://www.pagel.com).



**PAGEL®**  
SPEZIAL-BETON GMBH & CO. KG

WOLFSBANKRING 9 · 45355 ESSEN · GERMANY  
TEL. +49 201 68504-0 · FAX +49 201 68504-31  
INTERNET [WWW.PAGEL.COM](http://WWW.PAGEL.COM) · E-MAIL [INFO@PAGEL.COM](mailto:INFO@PAGEL.COM)