

PAGEL[®]

SPEZIAL-BETON



V2

QUICK SETTING GROUT



- Frost and road-salt resistant
- High early strengths
- High flowability
- Free of chlorides
- A1 non-combustible

*...we produce great grout
— worldwide!*

V2 PAGEL-QUICK SETTING GROUT

PRODUCTS

- **V2/10 PAGEL-GROUT** (0–1 mm)
- **V2/40 PAGEL-GROUT** (0–4 mm)
- **V2/80 PAGEL-GROUT** (0–8 mm)
- **V2/160 PAGEL-GROUT** (0–16 mm)

PROPERTIES

- cement-bound and free of chlorides
- resistant to frost and dew-salt
- develops a controlled increase in volume
- high early and final strength
- impervious to water and resistant to oil and chemicals
- low modulus of elasticity and high bending tensile strength
- low w/c-value ($\leq 0,35$)
- certified to fire protection class A1 as specified by EN 13501 and DIN 4102
- can be **pumped** and is easy to process
- **Complies** with the DafStb Code of Practice (VeBMR) “Manufacture and use of cementbound grout and mortar”
- externally tested and factory quality controlled in compliance with the DafStb VeBMR Directive
- is monitored in accordance with the standards and guidelines in force and production is certified in accordance with **ISO 9001**

PROCESSING

SUBSTRATE: Clean thoroughly, remove all loose and unsound material such as cement slurry etc using a grit or water jet blaster or similar until the underlying grain structure is reached. The underlying substrate must have sufficient pull-off strength (i.m. $\geq 1.5 \text{ N/mm}^2$).

Remove all of the rust from any exposed reinforcement bars with a sandblaster (Sa 2 1/2 as specified under DIN EN ISO 12944-4).

Wet the surface approx. 6–24 hours before grouting until capillary saturation.

FORMWORK: Attach in such a way that it is leak proof and robust. Seal around concrete base with, e.g. sand or dry mortar.

MIXING: The grout is supplied ready for use and only needs to be mixed with water. Measure out the quantity of water specified on the packaging and pour most of it 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 another 2 minutes until it forms a uniform mass. Once the grout is ready mixed, apply immediately. If using a mixing and delivery pump and outputting material continuously, we recommend installing an agitator downstream of the mixing and delivery pump to ensure that the material is properly mixed.

MIXING WATER: Drinking water quality

GROUTING: The mixture should be poured from one side or corner only in one continuous pour. When grouting large areas, we recommend pouring the grout starting at the centre of the base using a funnel and/or a hose. Always grout anchor holes first (up to just below the top edge of the anchor hole) and then proceed to grouting the machine base etc.

CAUTION: Exposed areas: must be protected from wind, drafts and rapid evaporation of water (using foils, jute insulation, **O1 PAGEL-CURING AGENT**). Please refer to and observe the additional specifications listed on

FILES OF APPLICATION

- quick setting grout mortar for precision machines of all kinds
- turbines, generators, compressors, diesel engines and other power station equipment which are subjected to high vibrations
- anchor screws, fixings and base plates
- steel and concrete supports
- inished concrete parts and steel constructions
- bridge supports and bridge joint constructions
- crane rails and radio-telescopes
- rail support systems
- used with the Vossloh Repair system for slab tracks DFF 300 for the German Rail [DEUTSCHE BAHN] repair system „Solid track“
- paper, chemistry and refining equipment, wind turbines, mobile phone transmission masts
- steel and metallurgical works as well as mining installations

the **O1 PAGEL-CURING AGENT** technical data sheet if the grout will be exposed to extremely high or low temperatures, direct sunlight or wind.

Temperature limits for application (substrate, air and grout temperature): +5 °C to +35 °C

Applying the concrete in low temperatures and using cold mixing water will delay the concrete's strength development, require that it is intensely mixed and will reduce its flowability. High temperatures speed it up.

Protruding grout: Do not exceed the specified 50 mm when allowing grout to protrude and observe the structural specifications. When grouting dynamically stressed and prestressed base plates and machine foundations that are subject to high compression strengths at the edges, the grout should ideally be applied to be flush with the bearing plate, provided with a 45° edge using formwork or cut off flush with the bearing plate before it has set. This will prevent any stresses from becoming superimposed on one another and from becoming annihilated (observe static and structural specifications).

Non-Iron-Metals: Cement and all cement-bound building materials may, under certain conditions, cause a reaction with non-iron-metals within the area of application area (e.g. aluminium, copper, zinc) to loosen or come off. Please contact us for technical advice.



V2 PAGEL-QUICK SETTING GROUT

TECHNICAL DATA			◀ Grout		Concrete grout ▶	
TYPE			V2/10	V2/40	V2/80	V2/160
grain size	mm		0–1	0–4	0–8	0–16
height of under-casing	mm		5–30	20–100	50–200	100–400
quantity of water	%		13	13	11	10
consumption (dry mortar)	kg/dm ³		app. 2,0	app. 2,0	app. 2,1	app. 2,1
density of freshly mixed mortar	kg/dm ³		app. 2,25	app. 2,3	app. 2,3	app. 2,35
working time	20 °C min		app. 30	app. 30	app. 30	app. 30
measure of flow	5 min	cm	≥ 65	≥ 65	–	–
	30 min	cm	≥ 55	≥ 55	–	–
measure of extension	5 min	cm	–	–	≥ 70	≥ 60
	30 min	cm	–	–	≥ 62	≥ 52
degree of swelling	24 h	Vol. %	+ 0,4	+ 0,4	+ 0,4	+ 0,4
	28 d	Vol. %	+ 0,4	+ 0,4	+ 0,4	+ 0,4
compressive strength*	2 h	N/mm ²	≥ 5	≥ 5	≥ 5	≥ 5
	V2/10 and V2/40	N/mm ²	≥ 10	≥ 10	≥ 10	≥ 10
	Prism 40x40x160 mm	N/mm ²	≥ 12	≥ 12	≥ 12	≥ 12
	8 h	N/mm ²	≥ 15	≥ 15	≥ 15	≥ 15
	V2/80 and V2/160	N/mm ²	≥ 18	≥ 18	≥ 18	≥ 18
	Cube 150x150x150 mm	N/mm ²	≥ 30	≥ 25	≥ 25	≥ 40
	7 d	N/mm ²	≥ 60	≥ 60	≥ 60	≥ 60
	28 d	N/mm ²	≥ 70	≥ 70	≥ 70	≥ 70
	91 d	N/mm ²	≥ 75	≥ 80	≥ 80	≥ 80
	E-Modul (static)	N/mm ²	≥ 25.000	≥ 25.000	≥ 25.000	≥ 25.000
	28 d	N/mm ²	≥ 30.000	≥ 30.000	≥ 30.000	≥ 30.000

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

Packaging: 25-kg bag

Hazard class: Non-dangerous goods,
observe information on packaging

Giscode: ZP1

Moisture classes in reference to concrete corrosion caused by alkaline silica reactions

Moisture class	WO	WF	WA	WS
	dry	damp	damp • External alkali supply	damp • External alkali supply • Strong dynamic stress
V2	•	•	•	•

All of the aggregates used in PAGEL products are obtained from safe sources and correspond with the alkali sensitivity class E 1 as specified under DIN EN 12620.

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

Exposure class according to:
DIN 1045-2 and EN 206-1

PAGEL – QUICK SETTING 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
V2/10	•	••••	•••	•••	••••	••	•
V2/40	•	••••	•••	•••	••••	••	•
V2/80	•	••••	•••	•••	••••	••	•
V2/160	•	••••	•••	•••	••••	••	•

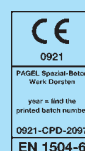
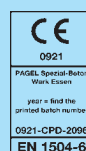
Classification according to DafStb VeBMR - Directive

	Products			
	V2/10	V2/40	V2/80	V2/160
Flowability class/ Expansion class	f2	f2	a3	a2
Shrinkage class	SKVM II	SKVM II	SKVB 0	SKVB 0
Early strength class	B	B	B	A
Compressive strength class	C 55/67	C 55/67	C 60/75	C 60/75

				
0921				
PAGEL® Spezial-Beton GmbH & Co. KG D-45355 Essen				
find the printed batch number				
0921-CPD-2096:Factory Essen / 0921-CPD-2097:Factory Dorsten				
EN 1504-6:2006				
V2/10, V2/40, V2/80 and V2/160 PAGEL-QUICK SETTING GROUT Products for the anchoring of reinforced bars (on the basis of hydraulic cement)				
Product name	V2/10	V2/40	V2/80	V2/160
Extraction resistance	≤ 0,6 mm at a load of 75 kN			
Chloridion content	0,005 M.-%	0,005 M.-%	0,004 M.-%	0,004 M.-%
* Glass transition temperature	NPD			
Reaction to fire	Euroclass A1			
* Creep behaviour under tensile load after three months of continuous load at 50 kN (only in polymers)	NPD			
Hazardous Substance	In accordance with EN 1504-6:2006, 5.3			

NPD: „No Performance Determined“

* These properties cannot be determined as the products are cement-bound.





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This technical data sheet supersedes previously issued information.