PAGEL®

SPEZIAL-BETON




V 2

QUICK SETTING GROUT

- frost and road-salt resistant
- high early strengths
- high flowability
- free of chlorides
- A1 non-combustible

...we produce great grout – worldwide!

V 2 PAGEL-QUICK SETTING GROUT

PRODUCTS

- V 2/1 0 PAGEL-GROUT (0–0.04 inch)
- V 2/4 0 PAGEL-GROUT (0–0.16 inch)
- V 2/8 0 PAGEL-GROUT (0–0.31 inch)
- V 2/1 6 0 PAGEL-GROUT (0–0.63 inch)

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 (≤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
- **company is certified according DIN EN ISO 9001:2008**

FILEDS 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

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. ≥217.5 PSI).
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, O 1 PAGEL-CURING AGENT). Please refer to and observe the additional specifications listed on the O 1 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): +41 °C to +95 °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 1.97 inch 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.

V 2 PAGEL-QUICK SETTING GROUT

TECHNICAL DATA

			◄ grout		concrete grout ►	
TYPE			V 2 / 1 0	V 2 / 4 0	V 2 / 8 0	V 2 / 1 6 0
grain size		inch	0–0.04	0–0.16	0–0.31	0–0.63
height of under-casing		inch	0.20–1.18	0.79–3.94	1.97–7.87	3.94–15.75
quantity of water		%	13	13	11	10
consumption (dry mortar)		lbs/ft³	app. 125	app. 125	app. 131	app. 131
density of freshly mixed mortar		lbs/ft³	app. 140	app. 143	app. 143	app. 147
working time		68 °F min	app. 30	app. 30	app. 30	app. 30
measure of flow	5 min	inch	≥ 25.59	≥ 25.59	–	–
	30 min	inch	≥ 21.65	≥ 21.65	–	–
measure of extension	5 min	inch	–	–	≥ 27.56	≥ 23.62
	30 min	inch	–	–	≥ 24.41	≥ 20.47
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	PSI	≥ 725	≥ 725	≥ 725	≥ 725
V2/10 and V2/40	4 h	PSI	≥ 1,450	≥ 1,450	≥ 1,450	≥ 1,450
prism 40x40x160 mm	6 h	PSI	≥ 1,740	≥ 1,740	≥ 1,740	≥ 1,740
	8 h	PSI	≥ 2,175	≥ 2,175	≥ 2,175	≥ 2,175
V2/80 and V2/160	12 h	PSI	≥ 2,610	≥ 2,610	≥ 2,610	≥ 2,610
cube 150x150x150 mm	24 h	PSI	≥ 4,350	≥ 3,625	≥ 3,625	≥ 5,800
	7 d	PSI	≥ 8,700	≥ 8,700	≥ 8,700	≥ 8,700
	28 d	PSI	≥ 10,150	≥ 10,150	≥ 10,150	≥ 10,150
	91 d	PSI	≥ 11,600	≥ 11,600	≥ 11,600	≥ 11,600
e-modul (static)	24 h	PSI	≥ 3,625,000	≥ 3,625,000	≥ 3,625,000	≥ 3,625,000
	28 d	PSI	≥ 4,350,000	≥ 4,350,000	≥ 4,350,000	≥ 4,350,000

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
Tests of fresh and hardened grout at 68°F ± 35.6°F, storage of the test pieces after 24 hours until the strength test in water at 68°F ± 35.6°F. Higher or lower temperatures result in deviating properties and test results of the fresh/hardened grout. Depending on the temperature the consistency can be adapted by a slight reduction of the mixing water.

storage: 6 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

P A G E L - G R O U T
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

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
V 2	·	·	·	·

All of the aggregates used in PAGEL products are obtained from safe sources and correspond with the alkali sensitivity class E1 as specified under DIN EN 12620.

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
V 2 / 1 0	•	• • • •	• • •	• • •	• • • •	• •	•
V 2 / 4 0	•	• • • •	• • •	• • •	• • • •	• •	•
V 2 / 8 0	•	• • • •	• • •	• • •	• • • •	• •	•
V 2 / 1 6 0	•	• • • •	• • •	• • •	• • • •	• •	•

Classification according to DAfStb VeBMR - Directive Products

	V 2 / 1 0	V 2 / 4 0	V 2 / 8 0	V 2 / 1 6 0
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

CE 0921
PAGEL SPEZIAL-BETON GMBH & CO.KG
Wolfsbankring 9
45355 Essen, Germany
10
170001
EN 1504-6:2006
V2/10
PAGEL Quick setting grout
Anchoring product

Pull-out	≤ 0.6 mm
Chloride ion content	≤ 0.05 %
Reaction to fire	A1

CE 0921
PAGEL SPEZIAL-BETON GMBH & CO.KG
Wolfsbankring 9
45355 Essen, Germany
10
170004
EN 1504-6:2006
V2/40
PAGEL Quick setting grout
Anchoring product

Pull-out	≤ 0.6 mm
Chloride ion content	≤ 0.05 %
Reaction to fire	A1

CE 0921
PAGEL SPEZIAL-BETON GMBH & CO.KG
Wolfsbankring 9
45355 Essen, Germany
10
170008
EN 1504-6:2006
V2/80
PAGEL Quick setting grout
Anchoring product

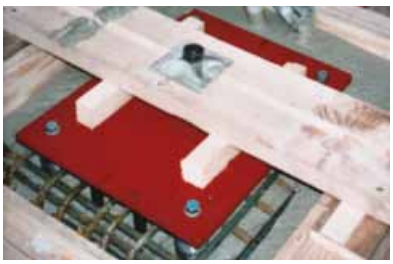
Pull-out	≤ 0.6 mm
Chloride ion content	≤ 0.05 %
Reaction to fire	A1

CE 0921
PAGEL SPEZIAL-BETON GMBH & CO.KG
Wolfsbankring 9
45355 Essen, Germany
10
170006
EN 1504-6:2006
V2/160
PAGEL Quick setting grout
Anchoring product

Pull-out	≤ 0.6 mm
Chloride ion content	≤ 0.05 %
Reaction to fire	A1

PAGEL Spezial-Beton GmbH & Co.KG 45355 Essen Werk Essen VeBMR QDB QUALITÄTSGEMEINSCHAFT DEUTSCHE BAUINDUSTRIE

According to the 3rd correction of DAfStb Rili SIB (8) may V 2 / 8 0 P A G E L - G R O U T and V 2 / 1 6 0 P A G E L - G R O U T (both SKVB I and early strength class A) be used for reprofiling concrete structures such as concrete after DIN EN 206-1 in conjunction with DIN 1045-2 (maximum permissible Layer thickness 3.94 inch).

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WOLFSBANKRING 9 · 45355 ESSEN · GERMANY
TEL. +49 201 68504-0 · FAX +49 201 68504-31
INTERNET WWW.PAGEL.COM · E-MAIL INFO@PAGEL.COM

TÜV CERT EN ISO 9001:2000 Nr. 04100 19950488