

PAGEL®-CONCRETE-GROUT

PROPERTIES

- V 80 C 45 (0-8mm) concrete-grout
V 1 60 C 45 (0-16mm) concrete-grout
- Grout for concrete bases of a strength class comparable to C20/25 or C25/30 or above
- Cementitious and chloride-free
- Low modulus of elasticity
- Low heat generation of hydration
- Frost and deicing-salt resistant: CDF tested in compliance with DIN CEN/TS 12390-9
CIF tested in compliance with the BAW Data Sheet on Frost Testing
- Controlled and even expansion
- Impermeable to water and largely resistant to oils and fuels
- Certified to fire protection class A1 as specified by EN 13501 and DIN 4102
- Suitable for pumping with a PABEC IV feed pump; suitable for mixing and pumping with a PABEC II machine
- Complies with the DafStb Directive (VeBMR) on the "Manufacture and use of cementitious concrete and grout"
- Externally tested and factory quality controlled in compliance with the DafStb VeBMR Directive
- monitored in accordance with standards and directives currently in force, production is certified in accordance with **ISO 9001**

FIELDS OF APPLICATION

- columns and machines
- Hydraulic structures, sluices and weir systems
- Steel structures for hydraulic engineering
- When using large quantities of grout and if there is a simultaneous drop in hydration temperatures
- Grout compliant with the BAW's second concrete Directive
- noise prevention walls
- supporting of buildings
- Repair grout for structural repairs (apply for ZIE or UiG)

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

	XO	XC	XD	XS	XF	XA	XM
V 80 C 45	0	1 2 3 4	1 2 3	1 2 3	1 2 3 4	1 2 3	1 2 3
V 1 60 C 45	•	• • • •	• • • •	• • • •	• • • •	• • • •	• •

V 80 C 45

V 1 60 C 45



V 80 C 45

V 160 C 45

TECHNICAL DATA

TYPE		V 80 C 45	V 160 C 45
grain size	mm	0-8	0-16
grouting height	mm	60-200	80-400
amount of water	%	10	10
consumption	kg/dm ³	2,0	2,1
processing-time (20°C)	min.	app. 90	app. 90
slump	5 min. cm	≥ 60	≥ 50
expansion	24 h Vol. %	≥ 0,4	≥ 0,4
compressive strength*	24 h N/mm ²	≥ 15	≥ 15
EN 12390-3	7 d N/mm ²	≥ 40	≥ 45
cube 15x15x15cm	28 d N/mm ²	≥ 60	≥ 60
	56 d N/mm ²	≥ 65	≥ 65
	91 d N/mm ²	≥ 70	≥ 70
bending strength	24 h N/mm ²	≥ 1.5	≥ 1.5
EN 12390-5	7 d N/mm ²	≥ 3.5	≥ 3.5
	28 d N/mm ²	≥ 5.0	≥ 5.0
	56 d N/mm ²	≥ 6.0	≥ 7.0
	91 d N/mm ²	≥ 7.0	≥ 8.0

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: 9 months, dry in well sealed bags
supplied in: 25-kg-bags
hazard class: no dangerous substance observe safety data sheet
GISCODE: ZPI

CE CE Mark and EC conformity
 according to EN 934-4:2001/A1:2004
 Reg.-No.: 0921-BPR-2010
 EN 934-4 compliant grout additive

	Unit	Test value	Categori- sation	Test value	Categori- sation
		V 80 C 45		V 160 C 45	
Flowability class/ Expansion class	mm	630	a2	580	a1
Shrinkage	ε _{S, m 91} - mm/m	0,6	SKVB I	0,7	SKVB I
	ε _{S, l 91} - mm/m	0,6		0,7	
Early strength class	f _{c, cube, 24 min, N/mm²}	22	C	16	C
Compressive strength class	f _{ci, cube, 28 d} f _{c, mcube, 28 d}	74	C50/60	69	C50/60

PROCESSING

SUBSTRATE: Clean thoroughly, free of loose and unsound material, remove any cement slurry by means of high pressure water jets or other equipment down to the load bearing grain structure. Approx. 6 hours before grouting prewet to 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 and only has to be mixed with water. Apart from a residual quantity pour water into the forced-circulation mixer, add dry mortar and mix for approx. 3 minutes. Add the rest of the water and mix for a further 2 minutes. When applying in the mixing and conveying technic an agreement regarding to what kind of machinery is to be used should be reached.

GROUTING: Place the mixed grout from one side or corner only, if possible in one continuous pour. When grouting large areas we recommend to apply the grout starting from the middle of the plate.

CAUTION: Exposed areas must be protected against wind, draught and premature evaporation by using for example plastic foil or O1 PAGEL-SURFACE-PROTECTION. Heights and shoulders around base plates must not exceed 1.97 inch. In the event of frost please contact our Technical Department. Low temperature working conditions and colder mixing water 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.



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