

# PAGEL®

## SPEZIAL-BETON



## VT

### TURBO GROUT



- frost and road-salt resistant (CDF test)
- extremely free flowing
- non-shrink
- water-impermeable
- Highly cost efficient
- A1 non-combustible

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

# VT PAGEL-TURBO GROUT

## PROPERTIES

- Can be applied and starts to set rapidly
- extremely easy to use
- extremely free flowing
- does not contain any chlorides
- non-shrink
- water-impermeable
- Easy to use (+5°C – +30°C)
- frost and road-salt resistant (CDF test with a 3% sodium chloride solution)
- A1 fire resistant
- high economy

## FIELDS OF APPLICATION

- Sewer and shaft rehabilitation
- For grouting access hatches, slide valves and flaps, signalling systems (road construction)
- Grouting of feedthroughs for gas and water installations



## PRODUCTS

- VT05 PAGEL-TURBO GROUT (0-0,5 mm)
- VT10 PAGEL-TURBO GROUT (0-1,0 mm)

## TECHNICAL DATA

TYP (Mortar)			VT05	VT10
<b>grain size</b>	mm		0-0.5	0-1
<b>grouting high</b>	mm		10-30	10-50
<b>amount of water</b>	%	max.	18	16-18
<b>consumption (dry grout)</b>	app. kg/dm <sup>3</sup>		1.9	1.9
<b>density of freshly mixed mortar</b>	app. kg/dm <sup>3</sup>		2.10	2.20
<b>working time</b>	20°C	app. min.	3	3
<b>slump</b>		cm	≥ 30	≥ 30
<b>expansion</b>	24 h	%	+ 0.4	+ 0.4
<b>compressive strength*</b> prism: 4x4x16cm	30 min	N/mm <sup>2</sup>	≥ 5	≥ 5
	1 h	N/mm <sup>2</sup>	≥ 8	≥ 8
	2 h	N/mm <sup>2</sup>	≥ 10	≥ 10
	4 h	N/mm <sup>2</sup>	≥ 13	≥ 13
	24 h	N/mm <sup>2</sup>	≥ 25	≥ 45
	7 d	N/mm <sup>2</sup>	≥ 40	≥ 60
<b>bending strength</b> prism: 4x4x16cm	28 d	N/mm <sup>2</sup>	≥ 50	≥ 70
	30 min	N/mm <sup>2</sup>	≥ 2	≥ 2
	1 h	N/mm <sup>2</sup>	≥ 2	≥ 2
	2 h	N/mm <sup>2</sup>	≥ 2	≥ 2
	4 h	N/mm <sup>2</sup>	≥ 3	≥ 3
	24 d	N/mm <sup>2</sup>	≥ 4	≥ 7
7 d	N/mm <sup>2</sup>	≥ 8	≥ 9	
28 d	N/mm <sup>2</sup>	≥ 10	≥ 10	

\* DIN EN 196-1-compliant compressive strength testing

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

**Storage:** 6 months in dry and original sealed sacks

**Packaging:** 25-kg bag

**Hazard class:** non-dangerous goods, observe information on packaging

**GISCODE:** ZP1

Exposition category according to:

DIN 1045-2 / EN 206-1

PAGEL - TURBO GROUT

	XO	XC	XD	XS	XF	XA	XM
	0	1 2 3 4	1 2 3	1 2 3	1 2 3 4	1 2 3	1 2 3
VT05	•	• • • •	• • • •	• • • •	• • • • • •	• • • •	•
VT10	•	• • • •	• • • •	• • • •	• • • • • •	• • • •	•

## PROCESSING

**SURFACE:** Clean thoroughly; remove all loose and unsound material, as well as any substances that might prevent the grout from adhering to the surface until carrying capacity of (concrete) substrate has been reached (average tear strength of 1.5 N/mm<sup>2</sup>). Wet the substrate for approx. 6 hours before grouting until saturated. Make sure the substrate is not subsequently covered with a continuous film of water. The substrate should only be slightly damp when applying the grout.

**FORMWORK:** Must be of rigid construction: carefully seal around concrete base using sand or dry mortar. All formwork materials must be non-absorbent or coated with a suitable release agent.

**MIXING:** The mortar is supplied ready for use and only needs to be mixed with water. Fill the entire quantity of water into a suitable compulsory mixer, add all of the dry mortar and mix for approx. 60 - 90 seconds; pour immediately.

PAGEL TURBO GROUT can also be mixed using manual mixers with single and twin mixing attachments. The mixing attachment's mixing speed must be such as to ensure that the mixture is mixed rather than agitated.

**working time VT10**  
at 5° app. 4 minutes  
at 20° app. 3 minutes  
at 30° app. 1 minute

**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 grouting funnel filling inset. Any protruding grouting edges required for static load transfer must not exceed a height or length of 50 - 70 mm.

**FINISHING:** Protect grout as quickly as possible after application, or at the latest once the surface has started to set, against premature water evaporation by, e.g. spraying or misting it with water and protecting it from wind by covering it with foils or moistened fabric sheeting. Finishing / curing period depending on ambient and component temperatures is 3 - 5 days.

**TEMPERATURE LIMITS:** + 1 to + 30°C  
Frost resistant within 2 hours of application.



## PROPERTIES

- Can be applied and starts to set rapidly
- extremely easy to use
- plastisize
- does not contain any chlorides or accelerators
- non-shrink
- water-impermeable
- Easy to use (+5°C – +30°C)
- frost and road-salt resistant
- A1 fire resistant
- high economy

## FIELDS OF APPLICATION

- Sewer and shaft rehabilitation
- For sealing domestic installations
- bearings for manhole rings

## PRODUCT

- VT-P10 PAGEL-TURBO GROUT plastisize mortar (0–1,0 mm)

### TECHNICAL DATA

TYPE (plastisize mortar)		VT-P10	
grain size	mm	0–1	
packing grout	mm	10–50	
amount of water	%	max.	14
consumption (dry grout)	app. kg/dm <sup>3</sup>	1.9	
density of freshly mixed mortar	app. kg/dm <sup>3</sup>	2.2	
working time	20°C	app. min.	3
slump * 15 Cycles		cm	14–16*
expansion	24 h	Vol. %	0.4
compressive strength*	30 min	N/mm <sup>2</sup>	≥ 5
	prism: 4x4x16cm	1 h	≥ 6
		2 h	≥ 8
		4 h	≥ 10
		24 d	≥ 35
		7 d	≥ 50
	28 d	≥ 60	
bending strength	30 min	N/mm <sup>2</sup>	≥ 2
	prism: 4x4x16cm	1 h	≥ 2
		2 h	≥ 2
		4 h	≥ 2
		24 d	≥ 4
		7 d	≥ 8
	28 d	≥ 10	

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



**Storage:** 6 months in dry and original sealed sacks

**Packaging:** 25-kg bag

**Hazard class:** non-dangerous goods, observe information on packaging

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Exposition category according to:  
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PAGEL – TURBO GROUT

	XO	XC	XD	XS	XF	XA	XM
	0	1 2 3 4	1 2 3	1 2 3	1 2 3 4	1 2 3	1 2 3
VT-P10	•	• • • •	• • •	• • •	• • • •	• • •	• •



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

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**working time** VT-P10

at 5° app. 4–6 minutes

at 20° app. 3–5 minutes

at 30° app. 2–4 minutes

**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 grouting funnel filling inset. Any protruding grouting edges required for static load transfer must not exceed a height or length of 50 - 70 mm.

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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).

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