

# PAGEL®-GROUT

## PROPERTIES

- **high flowability** for at least 90 minutes
- **controlled expansion** with a rigid bond
- **low development of warmth**
- **low modulus of elasticity**
- **resistant to freeze/thaw cycles**
- **certified** to fire protection class A1 as specified by EN 13501 and DIN 4102
- **pumpable** and easy to pour – also when using mixing and conveying pumps
- **easy to pour**, need only be mixed with water
- **controlled volumination**
- **water-impermeable**, largely impervious to oil, delays the corrosion process
- **externally tested** and factory quality control according to the "Merkblatt für Vergussmörtel" ("Leaflet for Grouts") (DBV)
- "Allgemeine bauaufsichtliche Zulassung" (General Constructional Permission)  
PAGEL-ADDITIVE-CONCENTRATE
- is subject to **constant controlling** in accordance with the recognized standards and guidelines. Product is certified in accordance with ISO 9001.
- Approved under the building authority's regulations within the scope of PFEIFER-VS®-bar-systems:  
PFEIFER-VS®-bar-systems TZ100  
Approval number: Z-21.8-1847  
PFEIFER-VS®-bar-systems BZ250  
Approval number: Z-21.8-1792  
PFEIFER-VS®-plus-box  
Approval number: Z-21.8-1839  
PFEIFER-VS®-slim-box  
Approval number: Z-21.8-1875

Classified in accordance with DAfStb VeBMR Rili

VS® PAGEL®-GROUT

Flowability-/Expansion class	a3
Shrinkage	SKVBII
Early strength class	A
Compressive strength class	C60/75

## FIELDS OF APPLICATION

- rigid joint grouting to connect concrete parts with PFEIFER®-VS®-BOX system elements
- grouting of tensile-and transverse-force stressed and strained prefabricated joints in connection with PFEIFER®-VS®-BOX
- grouting of connections with:  
PFEIFER® column base system  
connection of prefabricated columns with concrete foundation  
PFEIFER® wall shoe system  
connection of prefabricated walls with base plates and/or diaphragms

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
VS	•	• • • •	• • •	• • •	• • • •	• •	•



VS®

TECHNICAL DATA			
TYPE	VS®		
Grain size	mm		0-5
Grouting height	mm		20-120
Quantity of water	%		12
Consumption	kg/dm³		2.00
Density of freshly mixed mortar	app. kg/dm³		2.3
Flowability	immediately	cm	≥ 70
	30 min.	cm	≥ 62
Processing time (20 °C)	min.		app. 90
Measure of extension	24 h	Vol. %	+ 0.5
	28 d	Vol. %	+ 0.5
Compressive strenght*	1 d	N/mm²	≥ 40
	7 d	N/mm²	≥ 70
Prism 4x4x16 cm	28 d	N/mm²	≥ 80
	90 d	N/mm²	≥ 90
Bending strength	1 d	N/mm²	≥ 4
	7 d	N/mm²	≥ 6
	28 d	N/mm²	≥ 8
	90 d	N/mm²	≥ 10
E-module (static)	7 d	N/mm²	30.000
	90 d	N/mm²	35.000

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

\* testing of compressive strength according DIN EN 12390-3

**Storage:** 12 months in well sealed bags, dry

**Packaging:** 25 kg bags

**Hazard class:** No dangerous substance, observe safety data sheet

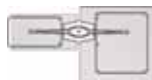
**Giscode:** ZP1



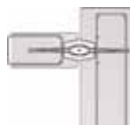
CE-Mark and EG conformity in accordance to EN 934-4:2001/A1:2004  
Reg.-No.: 0921-BPR-2010  
Concrete additive for tendons according EN 934-4



wall-edgeless-hit



wall-edge-hit



wall-column-hit

## APPLICATION

**SURFACE:** Pre-wet prepared concrete contact surface fitting joint formwork and/or just before grouting the joint itself. Having company manufactured prefabricated steel concrete parts one can assume that no cement slurry and/or other substances acting separating are existing. Should this be contrary to expectations be the case possible soiling must be removed from the contact surface of the joint sides by means of suitable measures before fitting the joint formwork.

**JOINT FORMWORK:** Prefabricated wall elements normally are put together with a gap of 20 mm. After the VS® loops have been connected with a concrete round re-bar suitable formwork is to be fitted to the wall joints. Depending on the height of the wall grouting takes place in two grouting processes (see separate leaflet regarding application).

**MIXING:** VS® PAGEL®-GROUT is mixed in a compulsory mixer. To produce the mixture approx. 2/3 of the maximum allowed quantity of water is filled into the compulsory 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 in one continuous pour till the desired filling height is reached. VS® PAGEL®-GROUT can be applied by using a pipe-funnel-system. When grouting large areas we suggest to use an open conveying system with worm gearing (ask for our separate leaflet regarding application).

**CAUTION:** After formwork removal joints must be protected against evaporation (keep wet, O1 PAGEL®-EVAPORATION AGENT).

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All of the information, technical advice and recommendations provided in this brochure are based on comprehensive research and practical experience. However, they are - including with regard to third-party property rights - for information only and do not release customers from their responsibility to check whether the above products and procedures are suitable for their intended use. The above test data has been derived under standard climatic conditions and in accordance with DIN 50014. These values are average values and analyses, and product values may slightly differ upon delivery. Any recommendations contrary to those stated in this brochure require our written consent. The planner and processing company must always obtain information on the latest state of the art and relevant valid edition of this brochure. Please do not hesitate to contact our customer service department at any time and many thanks you for your interest. This brochure makes all previously published product information null and void. Please visit our website for the latest valid version of this brochure at [www.pagel.com](http://www.pagel.com).



**PAGEL®**  
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