



PAGEL® PRECISION NON-SHRINK GROUT

PROPERTIES

- V1®/50 3/4" – 4"/ 20 – 100 mm grouting height
V1®/10 < 13/16"/ < 30 mm grouting height
V1®/160 > 4"/ > 100 mm grouting height
- **high flowability**
- **Working Time:** > 120 minutes
- **cement-based and chloride-free**
- **controlled and even expansion** with a rigid bond between concrete foundation and machine base plate
- **high early and final strength**
- **low modulus of elasticity** in connection with high bending strength
- **resistant to cracks** even when having a low w/c-value
- **resistant to freeze/thaw cycles**, waterproof, resistant to oil and petrol
- **pumpable** and easy to pour – even during low temperatures
- **externally tested** and factory quality control according to the "Merkblatt für Vergussmörtel" ("Leaflet for Grouts") (DBV)
- permission for use in **drinking water areas (European standards)**
- "Allgemeine bauaufsichtliche Zulassung" (General Constructional Permission) Mo. PA VII-1/419 (DIBt) for the Additive-Concentrate

FIELDS OF APPLICATION

- **universal-grout** for precision machines of any kind
- **turbines**, generators, compressors, diesel engines and other power equipment operating under heavy vibration
- **anchor screws**, levelling units and sole plates
- **steel and concrete columns**
- **prefabricated concrete units** and structural steelworks
- **bridge bearings** and construction joints
- **crane rails** and radio telescopes
- **steel and blast-furnace plants** as well as mines
- **paper plants**, chemical plants and refineries

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
V1®/10	•	• • • •	• • •	• • •	• • • •	• • •	• •
V1®/50	•	• • • •	• • •	• • •	• • • •	• • •	• •
V1®/160	•	• • • •	• • •	• • •	• • • •	• • •	• •

V1®/50_S

V1®/10_S

V1®/160_S



V1®/50_{US}

V1®/10_{US}

V1®/160_{US}

TECHNICAL DATA

TYPE		V1®/10	V1®/50	V1®/160
Aggregate Size	inch/mm	0 - 1/32" / 0 - 1	0 - 3/16" / 0 - 5	0 - 3/8" / 0 - 8
Grouting height	inch/mm	< 13/16" / 5-30	3/4" - 4" / 20 - 120	> 4" / > 100
Amount of water	%	14 - 16	13 - 15	12 - 14
	Quarts	3 3/4 - 4 1/4	3 1/2 - 4	3 1/4 - 3 3/4
	Liters	3.5 - 4	3.25 - 3.75	3 - 3.5
Material needed	lbs/ft ³	125	125	125
Density of freshly mixed mortar	lbs/ft ³	142	144	145
Workability	at 70°F Min.	> 120	> 120	> 120
Flowability (Flow Channel)	inch (cm)	22 (56)	22 (56)	26 (67)
measure of extension (DIN 1048)	immediately	inch (cm)	-	> 11.81 (30)
	60 Min.	inch (cm)	-	> 11.81 (30)
Expansion	24 h	Vol. %	+ 0.5	+ 1.0
	28 d	Vol. %	+ 0.5	+ 1.0
Compressive strength	24 h	PSI (MPA)	4,640 (32)	5,568 (38)
	V1/10, V1/50: 1.57 x 1.57 x 6.30 inch	7 d	PSI (MPA)	9,860 (68)
	V1/160: 3.94 x 3.94 x 3.94 inch	28 d	PSI (MPA)	11,642 (80)
		90 d	PSI (MPA)	14,210 (98)
Bending strength	24 h	PSI (MPA)	870 (6)	856 (7)
	1.57 x 1.57 x 6.3 inch	7 d	PSI (MPA)	1,160 (8)
		28 d	PSI (MPA)	1,450 (10)
		90 d	PSI (MPA)	1,450 (10)
Modulus of elasticity	7d	PSI (MPA)	4.901 x 10 ⁶ (33,800)	4.785 x 10 ⁶ (33,000)
	90 d	PSI (MPA)	5.771 x 10 ⁶ (39,800)	5.699 x 10 ⁶ (39,300)

All test data are guide values only.

Additive : General Construction Permission
Nr. Z-3.21-1461
Corresponding Certificate Nr. 219000

Storage: 12 months in sealed, dry bag

Packaging: 25-kg-bag / 55 lbs/bag

Yield: 0.44 ft³/bag

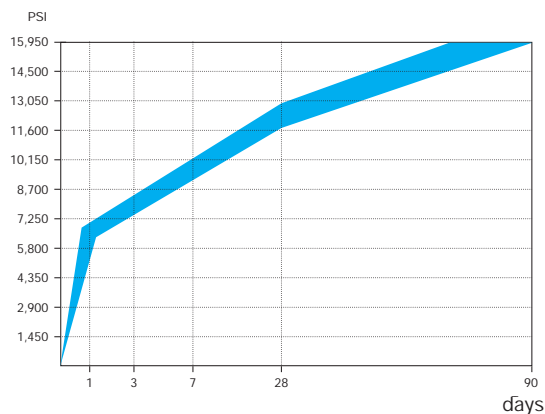
Hazard class: no dangerous substance, observe safety data sheet (MSDS)

GISCODE: ZP1

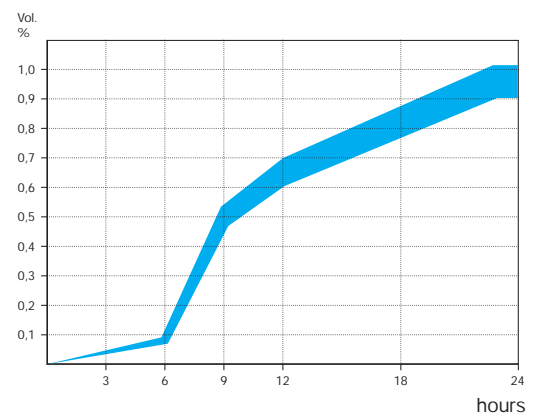


CE Mark and EC conformity
according to EN 934-4:2001/A1:2004
Reg.-No.: 0921-BPR-2010
EN 934-4 compliant grout additive

Development of compressive strength (V1/50):



Development of expansion:



APPLICATION

SURFACE: Clean thoroughly, free of loose and unsound material, remove any cement slurry by means of hydraulic water-blasting or similar till carrying capacity of grain structure is reached. Sufficient adhesion must be granted (i. m. > 218 PSI). Prior to grouting, the surface must be wetted continuously for approx. 6 hours till 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, only water is to be added. Measure out the correct quantity of water and fill two thirds of this into a concrete 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 from one side or corner only in one continuous pour. When grouting large areas we suggest to pour starting from the middle – using a pipe or funnel. On machine installations fill the anchor bolt pockets first (up to approximately top of anchor bolt pockets) and then the underside of the machine. Working time: approx. 60 minutes.

CAUTION: Open areas must be protected against wind, drafts and premature evaporation by using for example plastic foil or O1 PAGEL-CURING AGENT.

Grouting shoulders: Heights and shoulders around base plates must not exceed 2 inches or 50 mm.

Temperature: Application between 41°F and 95°F (5°-35°C), low temperature working conditions retard the strength development and reduce the flowability while high temperatures accelerate the same.

Non-Iron-Metals: Cement as well as all cement-bound building materials may under certain circumstances cause a coming-off of non-iron-metals in the application area (for exemple aluminium, copper, zinc) please ask for our technical service.

DIN 1045 AND PAGEL-GROUT

Having **prefabricated units grout** is being used according to **DIN 1045** (6.7.1) for joints, between components and overlyingings.

PAGEL-GROUT belongs according to DIN 1045 to the subject heading **cement mortar** (2.1.3.1) and is in need of a General Construction Permission with a Corresponding Certificate for the additives.

PAGEL-CONCRETE-GROUT belongs to the subject heading **concrete** (B I and B II) and meets most of the demands of a **concrete with special characteristics** (6.5.7) (resistant to water, highly resistant to frost, highly resistant to chemical attacks).

Soucre material for PAGEL-GROUT:

Cement	according to DIN 1164
Surcharge:	according to DIN 4226 (eFT)
Additional material:	General Construction Permission.
Additives:	General Construction Permission.

FIELDS OF APPLICATION

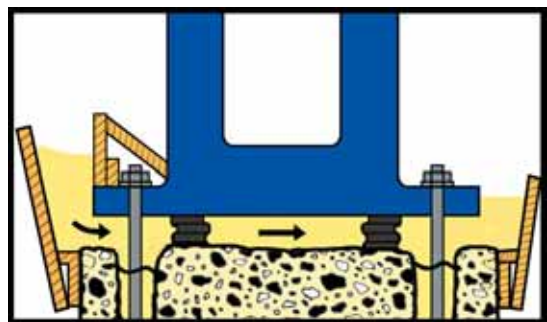
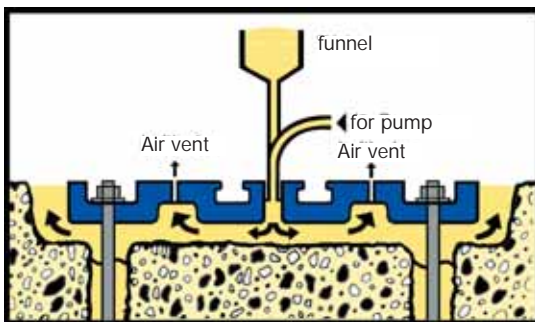
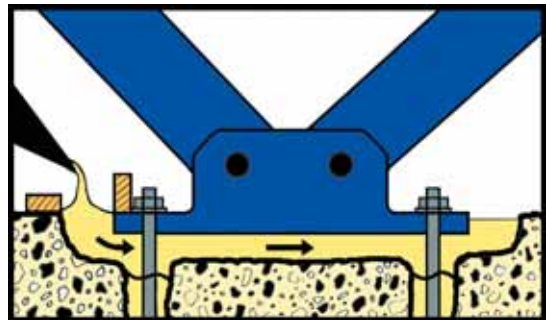
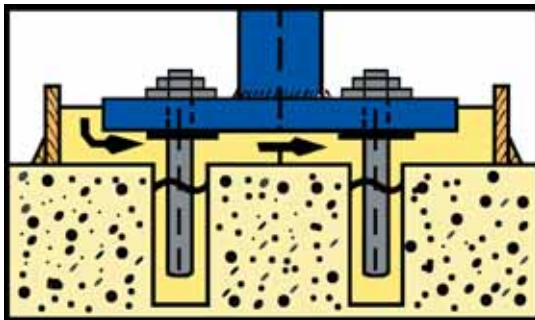
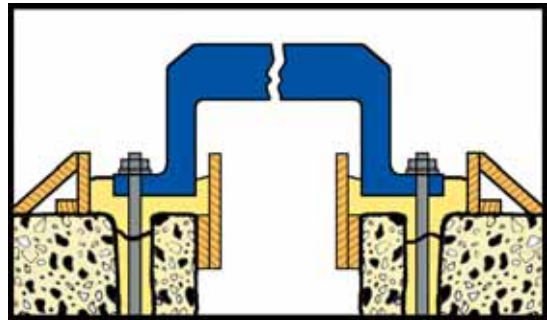
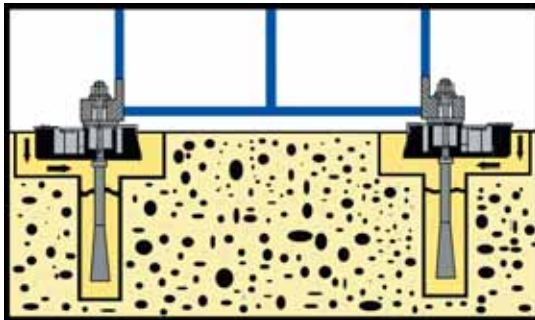
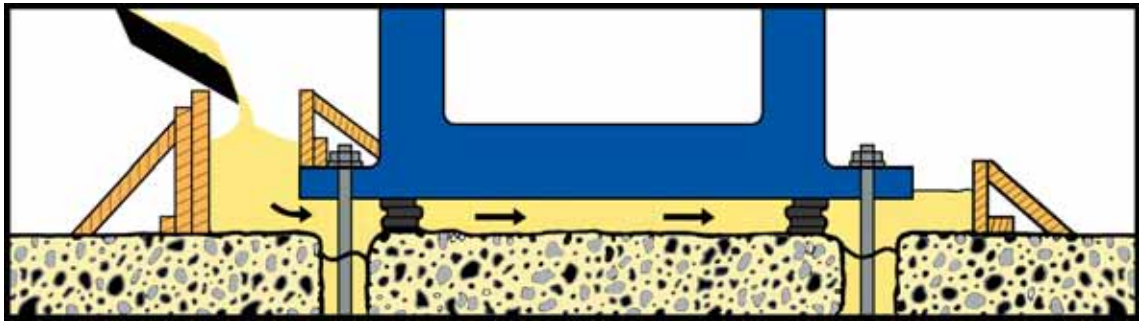
- **universal-grout** for precision machines of any kind
- **turbines**, generators, compressors, diesel engines and other power equipment operating under heavy vibration
- **anchor screws**, leveling units and sole plates
- **steel and concrete columns**
- **prefabricated concrete units** and structural steelworks
- **bridge bearings** and construction joints
- **crane rails** and radio telescopes
- **steel and blast-furnace plants** as well as mines
- **paper plants**, chemical plants and refineries

V1®/50_S

V1®/10_S

V1®/160_S

FIELDS OF APPLICATION



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.



PAGEL®-USA

4282 SHORELINE DRIVE · SPRING PARK
MINNESOTA 55384 · USA
OFFICE 001 952 942 6105 · FAX 001 952 942 6108
WWW.PAGEL-USA.COM · SALES@PAGEL-USA.COM