



V1®/50 PAGEL®-USA-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
- V1/50 combines the characteristics of V1 and V12 for grouting height from $3/4'' - 4'' / 20 - 100$ mm
- **high flowability**, up to 60 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-ratio (0.36-0.38)
- **resistant to freeze/thaw cycles**, waterproof, resistant to oil and petroleum
- **pumpable** and easy to pour – even during low temperatures
- **externally tested** and factory quality controlled according to the “Merkblatt für Vergussmörtel” (“Leaflet for Grouts”) (DBV)
- permission for use in **drinking water areas**
- “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**, 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
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PAGEL®-GROUT

TECHNICAL DATA

TYPE			V1/10	V1/50	V1/160
Aggregate size	inch/mm		0– ¹ / ₃₂ " / 0–1 mm	0– ³ / ₁₆ " / 0–5 mm	0– ⁵ / ₈ " / 0–16 mm
Grouting height	inch/mm		< ¹ / ₁₆ " / < 30 mm	³ / ₄ "–4" / 20–100 mm	> 4" / > 100 mm
Amount of water	%		12-13% 3 ¹ / ₄ –3 ¹ / ₂ QTS(3–3.25L)	15-16% 4–4 ¹ / ₄ QTS(3.25–4L)	11% 2 ⁵ / ₈ –3 QTS(2.5–2.75L)
Material needed	lbs/ft ³		125	133	131
Density of freshly mixed mortar	lbs/ft ³		142	154	145
w/c-ratio			0.35	0.36 – 0.38	0.35
Workability	at 70 °F Min.		> 90	60	> 90
Flowability (channel)	immediately	inch (cm)	27.56 (70)	26 (65)	–
	30 Min.	inch (cm)	26.77 (68)	24 (60)	–
measure of extension (DIN 1048)	immediately	inch (cm)	–	> 11.81 (30)	27.56 (70)
	30 Min.	inch (cm)	–	> 11.81 (30)	–
Expansion	24 h	Vol. %	+0.5	+1.0	+1.0
	28 d	Vol. %	+0.5	+1.0	+1.0
Compressive strength V1/10, V1/50: 1.57×1.57×6.30 inch V1/160: 3.94×3.94×3.94 inch	24 h	PSI (MPA)	6,235 (43)	6,772 (46.7)	7,395 (51)
	7 d	PSI (MPA)	8,700 (60)	9,324 (64.3)	10,150 (70)
	28 d	PSI (MPA)	12,615 (87)	11,963 (82.5)	13,195 (91)
	90 d	PSI (MPA)	14,500 (100)	–	14,210 (98)
Bending strength 1.57×1.57×6.30 inch	24 h	PSI (MPA)	870 (6)	856 (7)	1,015 (7)
	7 d	PSI (MPA)	1,160 (8)	1,349 (8)	1,160 (8)
	28 d	PSI (MPA)	1,450 (10)	1,450 (10)	1,450 (10)
	90 d	PSI (MPA)	1,450 (10)	1,450 (10)	1,450 (10)
E-Modul (cylinder)	7 d	PSI (MPA)	4.901 x 10 ⁶ (33,800)	4.785 x 10 ⁶ (33,000)	5.003 x 10 ⁶ (34,500)
	90 d	PSI (MPA)	5.771 x 10 ⁶ (39,800)	5.699 x 10 ⁶ (39,300)	5.815 x 10 ⁶ (40,100)

All test data are values derived under normal climate conditions. 777/50-2

Testing temperature: 68°F (20°C)

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

Storage: 12 months in sealed container, dry

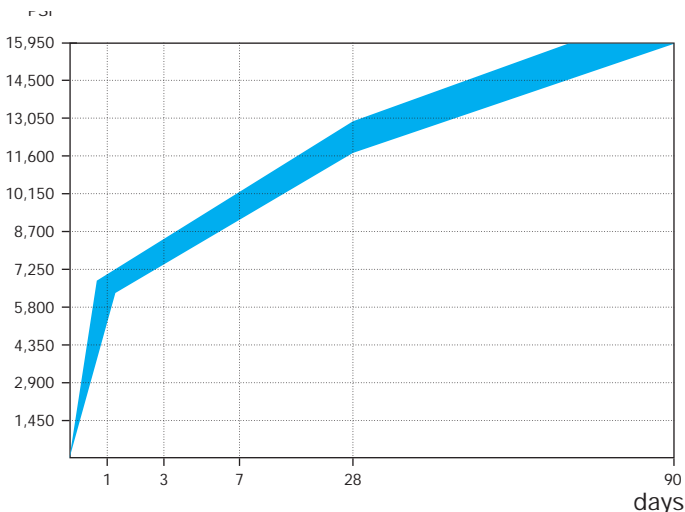
Packaging: 25kg / 55 lbs/bag

Yield: 0.41 ft³/bag

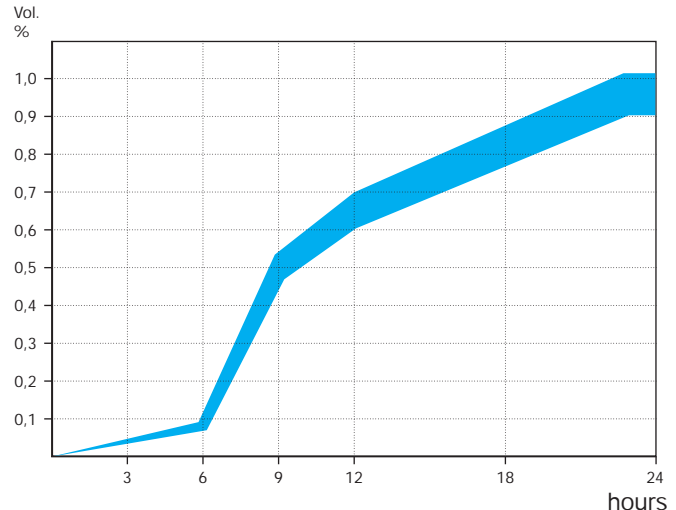
Hazard class: no dangerous substances, observe safety data sheet (MSDS)

GISCODE: ZP1

Development of compressive strength (V1/50):



Development of expansion:



V1/160

V1/50

V1/10

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 until saturated.
- 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 in quantities printed on back of bag. Measure out the correct quantity of water and add two thirds of this into a concrete mixer, add the dry mortar and mix for about 3 minutes. Then add 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. Set time: approx. 60 min.
- CAUTION:** Open areas must be protected against wind, draft 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-based building materials may under certain circumstances cause a coming-off of non-iron-metals in the application area (for example aluminum, copper, zinc). Please ask for our technical service.

DIN 1045 AND PAGEL-GROUT

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

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** (B1 and BII) 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

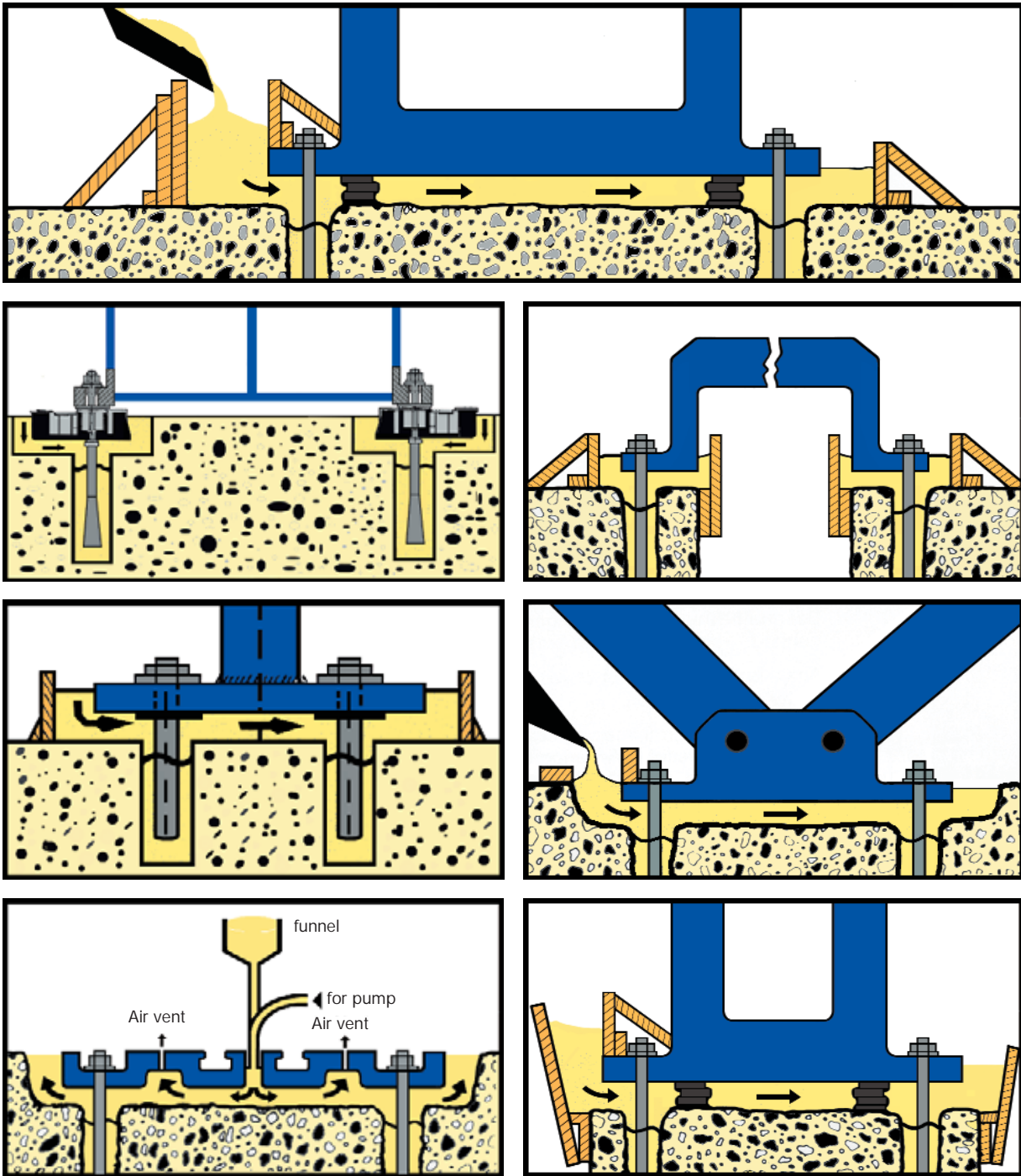
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V1®/10

V1®/50

V1®/160

FIELDS OF APPLICATION



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PAGEL®-USA

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V1®/160

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