

PAGEL®-USA

INDUSTRIAL GROUTS & MORTARS

GROUTS AND MORTARS
FOR THE TOUGHEST JOBS YOU'VE GOT™



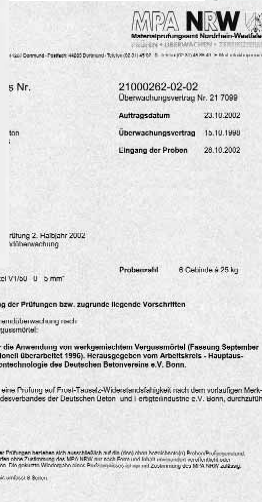
PRODUCT INFORMATION



PLEASE SEE THE LATEST INFORMATION ON THE INTERNET AT
WWW.PAGEL-USA.COM



Modern production guarantees high quality



For more than 35 years PAGEL® SPEZIAL BETON GmbH & Co. KG in Essen, Germany has influenced and played a major role in the development of grouts and special mortars. The PAGEL® GROUTING-SYSTEM has become a worldwide recognized system for grouting, and our product V1/50® is synonymous with the word "non-shrinking grout." A wide range of products, together with an undeviating quality backed by comprehensive customer service, has earned PAGEL® its outstanding reputation for being able to provide a product and solution for factory and industrial machine foundations. Many years of this reputation and excellent quality have resulted in our being certified with the EN ISO 9001. With this, we research and develop newer and more innovative products in our state-of-the-art laboratory and continue to deliver to you high quality PAGEL® materials. Our range of grouts, specialty concretes, industrial floors, and resins increases the life of industrial assets, protects and maximizes productivity and output of expensive equipment and machinery. Needless to say while your demands for quality materials are being served, our customer service will also fulfill your specific needs and requirements during construction by suggesting products, specifications and other technical services. After all, our customers believe, PAGEL® is a solid foundation to build on.

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

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CONVERSIONS

1N/mm ²	= 1 MPA = 145 PSI	1mm	= 0.04 inch
1 kg	= 2.2 lbs	1 m ^{3qd}	= 35.31 ft ³

GROUTS

GROUTS

V1/50*

PAGEL-GROUT*

V1*/160

V1*/10

free flowing over 90 minutes
non-shrink
high early- and final strengths
frost- and salt resistant
oil-resistant
chloride-free
pumpable
ready to use
externally tested

Machinery
Anchorings
Turbines
Bridge bearings
Potable water equipment
Concrete structures
High storage areas
Pre-cast concrete parts
Rails
Industrial plants



	Grain size inch	Grouting height inch	Compressive strength psi*			Bending strength psi*			Expansion Vol. %	Yield lbs/ft ³
			1 d	7 d	28 d	1 d	7 d	28 d		
V1*/50	0- ³ / ₁₆ " / 0-5 mm	³ / ₄ "- 4 ³ / ₄ " / 20-120 mm	6,772	9,324	11,963	856	1,349	1,450	+ 1.0	0.44
V1*/160	0- ⁵ / ₈ " / 0-16 mm	> 4" / > 100 mm	7,395	10,150	13,195	1,015	1,160	1,450	+ 1.0	0.44
V1*/10	0- ¹ / ₃₂ " / 0-1 mm	< ³ / ₁₆ " / < 30 mm	6,235	8,700	12,615	870	1,160	1,450	+ 0.5	0.44

PRE-MIXED GROUT

V14/10

PAGEL-PRE-MIXED GROUT*

V14/40

V14/80

plastic consistency
non-shrinking
high early- and final strengths

Struts
Rail bearings
Bearings/Bridge bearings
Concrete repairs



	Grain size inch	Grouting height inch	Compressive strength psi*				Bending strength psi*			Expansion Vol. %	Yield lbs/ft ³
			1 d	3 d	7 d	28 d	1 d	3 d	28 d		
V14/10	0 - 0.04	0.4 - 1.2	5,075	7,250	8,265	10,005	725	870	1,305	+ 0.9	0.44
V14/40	0 - 0.16	0.4 - 2.8	5,800	7,975	9,280	10,295	725	870	1,160	+ 0.8	0.42
V14/80	0 - 0.32	2 - 4	5,800	7,975	9,425	10,875	-	-	-	+ 0.6	0.44

CE * Additives used in these products have an "EG-Conformity Explanation" according to § 9 "Building Product Law Authorization." Thus the additives correspond to the regulations of the EN 934-2:2001-07.

Nearly all types of grouts are also available with **cements of classes CEM III/A or CEM I HS/NA (free of C₃A)**, - however, the technical data may vary according to cement type.

GROUTS

BASALT-GROUTS

PAGEL-BASALT-GROUTS*

heat resistant up to 752 °F (short duration)
 non-shrinking
 high early- and final strengths
 high abrasion resistance
 building material class A 1
 (not inflammable)

High-temperature area
 Machinery
 Anchorings
 Steel struts



- V15/30
- V15/50
- V15/80

	Grain size inch	Grouting height inch	Compressive strength psi*				Bending strength psi*			Expansion Vol. %	Yield lbs/ft³
			1 d	3 d	7 d	28 d	1 d	3 d	28 d		
			V15/30	0 – 0.12	1.2 – 2	6,625	10,150	11,600	13,195		
V15/50	0 – 0.2	2 – 4	7,250	10,585	12,615	13,775	1,160	1,160	1,595	+ 0.5	0.40
V15/80	0 – 0.32	2 – 5	6,815	9,425	12,325	14,500	1,015	1,160	1,595	+ 0.5	0.40

STEEL FIBRE REINFORCED GROUT

PAGEL-STEEL FIBRE REINFORCED GROUT*

for heavy traffic
 steel fibre reinforced
 non-shrinking
 extremely high strengths
 good elasticity

Heavy Duty Areas
 Crane rails
 Construction parts
 Presses
 Foundations



- V1A/40
- V1A/80

	Grain size inch	Grouting height inch	Compressive strength psi*				Bending strength psi*			Expansion Vol. %	Yield lbs/ft³
			1 d	3 d	7 d	28 d	1 d	3 d	28 d		
			V1A/40	0 – 0.2	1.6 – 2.8	6,815	9,570	11,310	13,340		
V1A/80	0 – 0.32	2.4 – 8	7,540	9,860	11,165	12,760	-	-	-	+ 1.0	0.42

STEEL FIBRE REINFORCED BASALT GROUT

PAGEL-STEEL FIBRE REINFORCED BASALT GROUT*

for heavy traffic
 steel fibre reinforced
 non-shrinking
 extremely high strengths
 good elasticity
 heat resistant up to 932 °F (short duration)

High-temperature areas
 Heavy Duty Areas
 Crane rails
 Construction parts
 Presses
 Foundations



- V1A15/30
- V1A15/50

	Grain size inch	Grouting height inch	Compressive strength psi*				Bending strength psi*			Expansion Vol. %	Yield lbs/ft³
			1 d	3 d	7 d	28 d	1 d	3 d	28 d		
			V1A15/30	0 – 0.12	0.16 – 0.24	6,815	9,570	12,180	14,500		
V1A15/50	0 – 0.2	2.4 – 5	8,700	10,005	13,050	14,790	870	1,015	1,740	+ 0.5	0.42

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QUICK-SETTING GROUT

GROUTS

V 2/10

PAGEL-QUICK-SETTING GROUT

V 2/40

load bearing after 2 hours (also at 41 °F)
free flowing
non-shrinking
ready to use
resistant to frost and dew salt
pumpable

Turbines
Anchoring, Fixatores
Machinery
Steel constructions
Bridge bearings
Rails
Struts



V 2/80

V 2/160

	Grain size inch	Grouting height inch	Compressive strength psi*				Bending strength psi*				Expan- sion Vol. %	Yield lbs/ft ³
			2 h	8 h	1 d	28 d	2 h	8 h	1 d	28 d		
V2/10	0 – 0.04	0.4 – 0.8	1,740	4,640	6,090	10,875	290	580	870	1,595	+ 0.5	0.44
V2/40	0 – 0.16	0.8 – 2.4	2,175	4,640	6,525	11,890	290	580	1,015	1,450	+ 0.6	0.44
V2/80	0 – 0.32	2 – 4	1,740	4,640	6,525	11,600	290	580	870	1,305	+ 0.5	0.42
V2/160	0 – 0.63	> 4	2,175	4,060	5,800	10,875	145	435	725	1,305	+ 0.4	0.42

EXTREMELY FAST SETTING GROUT

VB3

PAGEL-EXTREMELY FAST SETTING GROUT

VB3/40

load bearing after 30 minutes 68 °F
extremely high early strength
flowable and usable for boxing up
non-shrink, water resistant
resistant to frost and dew salt

Manhole cover grouting
Drain covers
Pipe channels
Installation works
Columns and prefabricated members



VB3S

VB3P

VB3: flowable
VB3S: super fast
VB3P: plastic consistency

	Grain size inch	Grouting height inch	Compressive strength psi*				Bending strength psi*				Expan- sion Vol. %	Yield lbs/ft ³
			0,5 h	1 h	1 d	28 d	0,5 h	1 h	1 d	28 d		
VB3	0 – 0.02	0.4 – 2	725	1,450	5,075	7,975	217.5	290	725	1,305	+ 0.4	0.48
VB3/40	0 – 0.16	1.2 – 2.4	870	1,450	5,075	7,975	217.5	290	725	1,305	+ 0.4	0.44
VB3S	0 – 0.02	0.4 – 2	1,015	1,740	4,350	6,525	217.5	290	725	1,305	+ 0.4	0.48
VB3P	0 – 0.02	0.4 – 2	725	1,450	4,350	5,800	217.5	290	725	1,160	+ 0.4	0.48

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GROUTS

SUPER HIGH STRENGTH GROUT

PAGEL-SUPER HIGH STRENGTH GROUT

V1/6OHF

high early and final strengths
highly fatigue resistance
controlled and even expansion
pumpable and easy to pour
resistant to cracks even when having a low w/c-value
oscillation-stabilizing

turbines, generators, compressors
wind-powered devices joints
grouting of joints and bearings
rail support systems, Ribbed slabs
and automatic warehouse supports



	Grain size inch	Grouting height inch	Compressive strength psi*				Bending strength psi*			Expansion Vol. %	Yield lbs/ft³
			1 d	3 d	7 d	28 d	1 d	7 d	28 d		
V1/6OHF	0 – 0.24	1.57 – 3.94	11,745	12,905	13,920	16,675	-	-	-	+ 0.6	0.40

ANCHOR GROUT

PAGEL-ANCHOR GROUT

E1

pumpable and injectable
free flowing, non-shrinking
high adhesive strength, mining approvals

Mining and tunnel construction
Stabilization of subsoil
Filling of joints and cavities



E1: workable at 86 °F 60 min.
E1SF: plastic consistency
E2: after 2 h: 1,015 psi Compr.

E1SF

E2

E3

	Grain size inch	Grouting height inch	Compressive strength psi*				Bending strength psi*			Expansion Vol. %	Yield lbs/ft³
			2 h	1 d	7 d	28 d	2 h	1 d	7 d		
E1*	0 – 0.02	to 0.8	-	6,525	8,700	10,150	-	870	1,015	+ 0.5	0.51
E1SF*	0 – 0.02	to 0.8	-	3,335	6,525	7,975	-	580	870	+ 0.3	0.49
E2	0 – 0.02	to 0.8	1,015	3,625	5,365	7,105	290	1,015	1,305	+ 1.0	0.49

INJECTION GROUT

PAGEL-INJECTION GROUT

E1F

E1F*	0 – 0.006	-	-	5,075	7,395	9,280	-	725	870	+ 0.5	0.54
E2F	0 – 0.006	-	1,450	4,640	5,365	7,105	290	870	1,015	+ 0.5	0.54

E2F

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PCC - MORTAR

CONCRETE REPAIRING

MSO2

PAGEL-PCC-MORTAR

MS20®

concrete-replacement-system according to ZTV-ING, ZTV-W easy to use suitable for processing on vertical and over-the-head-surfaces single component, sprayable vapor diffusionable reduces the penetration of CO₂ and moisture
MSO2: Corrosion protection and adhesion layer

Wall and ceiling areas and over-head work
Tunnels
Bridges
Facades
Parapets
Reprofiling
ZTV-ING-Application: PCC II
ZTV-W LB291 listed
Stress and strain classification according to DAfStb-RiLi-SIB: M2



	Grain size inch	Layer thickness inch	Compressive strength psi*				Bending strength psi*			Adhesive strength psi*	Yield strength lbs/ft ³
			1 d	3 d	7 d	28 d	1 d	3 d	28 d	28 d	
MSO2	-	-	-	-	-	-	-	-	-	-	0.47
MS20®	0 – 0.08	0.24 – 1.6	3,480	3,915	7,540	8,700	725	870	1,450	> 290	0.44

PCC - I - MORTAR

MHO2

PAGEL-PCC-I-MORTAR

MH20

MH80

concrete-replacement-system according to ZTV-ING, ZTV-W easy to use, plastic-strengthened highly suitable for use on horizontal substrates ready to use, single component resistant to frost and dew salt applicable and loadable under dynamic stress
MHO2: Corrosion protection and adhesion layer

Leveling course for bridges, tunnels and car parks (underlinings and coatings)
Concrete coatings,
Concrete floor surfaces,
Leveling of gradients
Repairs of outbreaks
ZTV ING application: PCC I
ZTV W LB291 listed
Stress and strain classification according to DAfStb-RiLi-SIB: M2



	Grain size inch	Layer thickness inch	Compressive strength psi*				Bending strength psi*			Adhesive strength psi*	Yield strength lbs/ft ³
			1 d	3 d	7 d	28 d	1 d	3 d	28 d	28 d	
MHO2	-	-	-	-	-	-	-	-	-	≥ 217.5	0.47
MH20	0 – 0.08	0.24 – 1.6	2,610	3,625	5,075	8,120	580	870	1,305	≥ 217.5	0.44
MH80	0 – 0.32	> 1.2	4,495	6,525	8,555	9,425	580	1,160	1,160	≥ 217.5	0.44


PAGEL-PCC-SCREEDING COMPOUND

MS05

screeing compound areas (ZTV-ING; OS-C; OS-DII), very high stability and adhesive, single component, universally applicable, plastic-strengthened and ready for use, sprayable, vapor diffusable, resistant to frost and dew salt

Repair of pores, holes, cracks, floor and wall irregularities; Substrates for surface protection coatings; Equalising of concrete maintenance work; Coating of finished parts, masonry and concrete surfaces; Filling of pipe slits



	Grain size inch	Layer thickness inch	Compressive strength psi*				Bending strength psi*			Adhesive Yield strength psi* lbs/ft ³	
			1 d	3 d	7 d	28 d	1 d	3 d	28 d	28 d	
											
MS05	0 – 0.02	0.06 – 0.24	2,175	3,335	5,075	7,250	435	725	1,305	≥ 217.5	0.44

SPCC-SPRAY-MORTAR

PAGEL-SPCC-SPRAY-MORTAR

SP20


SPCC-Spraying areas according to ZTV-ING, ZTV-W suitable for both wet and dry spraying techniques, tested with different spraying systems, single component, resistant to frost and dew salt, vapor diffusable,
MS02: Corrosion protection

Bridges
Tunnels
Concrete containers
Wall- and seiling surfaces
Facades
Struts, Beams
Waterway constructions



SP40

SP10

	Grain size inch	Layer thickness* inch	Compressive strength psi*				Bending strength psi*			Adhesive Yield strength psi* lbs/ft ³	
			1 d	3 d	7 d	28 d	1 d	3 d	28 d	28 d	
											
SP20	0 – 0.08	up to 2/3	3,045	4,640	6,380	7,830	580	870	1,160	≥ 290	0.44
SP40	0 – 0.16	up to 4/6	3,190	4,640	7,685	8,555	580	870	1,160	≥ 290	0.44
SP10	0 – 0.04	up to 0.8/0.8	2,755	5,220	6,235	7,540	580	580	1,305	≥ 290	0.44

* wet spraying method (multiple layers)/dry spraying method (multiple layers)

CONSTRUCTION-MORTAR


PAGEL-CONSTRUCTION-MORTAR

M3®

Concrete-Replacement-System according to PCC (DAFStb-Repair guideline), high carbonating resistance high bond performance, hardening under dynamic stress and strain
MS02: Corrosion protection and adhesion layer

Demand class M3
Struts
Plates
Bars
Wall and floor surfaces



	Grain size inch	Layer thickness inch	Compressive strength psi*				Bending strength psi*			Adhesive Yield strength psi* lbs/ft ³	
			1 d	3 d	7 d	28 d	1 d	3 d	28 d	28 d	
											
M3®	0 – 0.08	0.2 – 1.6	2,030	3,915	6,525	7,975	435	725	1,305	≥ 217.5	0.44

Nearly all types of grouts are also available with cements of classes CEM III/A or CEM I HS/NA (free of C₃A),- however, the technical data may vary according to cement type.

UNIVERSAL-MORTAR

CONCRETE REPAIRING

U02

PAGEL-UNIVERSAL-MORTAR

U05

areas of concrete replacement
free of polymers, single component
resistant to frost and dew salt
building material class A1
(not inflammable)
sprayable
fire protection mortar

Wall and floor surface
Industrial floor
Store and ramp areas
Joints



U10

U40

U80

U160



	Grain size inch	Layer thickness inch	Compressive strength psi*				Bending strength psi*			Adhesive Yield strength psi* lbs/ft ³	
			1 d	3 d	7 d	28 d	1 d	3 d	28 d	28 d	
U02	0 – 0.01	0.02 – 0.12	2,175	3,625	5,800	7,250	580	725	1,015	≥ 290	0.46
U05	0 – 0.02	0.08 – 0.24	2,320	3,915	5,365	7,250	580	580	870	≥ 290	0.46
U10	0 – 0.04	0.2 – 0.8	2,900	5,800	7,250	9,425	435	725	1,015	≥ 290	0.44
U40	0 – 0.16	0.4 – 1.6	3,625	5,800	7,250	9,425	580	725	1,015	≥ 290	0.44
U80	0 – 0.32	1.2 – 3.2	2,900	5,075	6,525	8,410	–	–	–	≥ 290	0.42
U160	0 – 0.64	≥ 2	6,235	6,960	7,975	9,860	–	–	–	≥ 290	0.42

QUICK-REPAIR-MORTAR

R20/02

PAGEL-QUICK-REPAIR-MORTAR

R20/05

areas of quick repair
load bearing after 2 hours
(even at 41 °F)
good adhesion
chloride free
easy application

Concrete and mortar surfaces
Self-leveling floors
Stairs
Industrial floors



R20/10

R20/20

R20/40

R20/80

	Grain size inch	Layer thickness inch	Compressive strength psi*				Bending strength psi*			Adhesive Yield strength psi* lbs/ft ³	
			2 h	4 h	1 d	7 d	1 d	3 d	28 d	28 d	
R20/02	0 – 0.01	0.02 – 0.2	725	870	2,175	4,350	290	580	870	≥ 290	0.46
R20/05	0 – 0.02	0.08 – 0.24	1,160	1,450	2,175	5,800	580	725	1,015	≥ 290	0.48
R20/10	0 – 0.04	0.12 – 0.8	1,015	1,450	2,900	5,800	580	725	1,160	≥ 290	0.46
R20/20	0 – 0.08	0.2 – 1.6	1,450	2,320	3,625	5,220	580	725	1,305	≥ 290	0.44
R20/40	0 – 0.16	0.8 – 2	1,450	2,030	3,625	6,525	580	725	1,160	≥ 290	0.44
R20/80	0 – 0.32	1.2 – 4	1,305	1,740	3,625	5,800	435	580	1,015	≥ 290	0.44

PAGEL-READY-FOR-USE-MORTAR - DRINKING WATER AREA

areas for drinking water fulfilled "Drinking water recommendation" (KTW) corresponds to DVGW W270 and W347 resistant to frost and dew salt sprayable water impermeable

Drinking water areas Wall and floor surface of tanks, canals, dams Waterpipes Sewage plants



- TW05
- TW10
- TW20
- TW40
- TW05 (weiss)
- TW10 (weiss)
- TW20 (weiss)
- TW40 (weiss)

	Grain size inch	Layer thickness inch	Compressive strength psi*				Bending strength psi*			Adhesive strength psi*	Yield strength lbs/ft ³
			1 d	3 d	7 d	28 d	1 d	3 d	28 d		
TW05	0 - 0.02	0.08 - 0.24	2,320	3,625	5,075	6,525	435	580	1,015	≥ 290	0.50
TW10	0 - 0.04	0.2 - 0.4	3,625	5,510	6,525	8,700	725	870	1,305	≥ 290	0.48
TW20	0 - 0.08	0.4 - 1.2	3,625	5,800	6,960	7,975	580	725	1,160	≥ 290	0.47
TW40	0 - 0.16	0.8 - 1.6	3,625	5,800	6,525	8,700	580	725	1,305	≥ 290	0.47
TW05 (weiss)	0 - 0.02	0.08 - 0.24	2,465	2,755	4,060	5,800	435	580	870	-	0.51
TW10 (weiss)	0 - 0.04	0.2 - 0.6	3,770	4,640	5,945	7,830	725	870	1,160	-	0.49
TW20 (weiss)	0 - 0.08	0.4 - 1.2	4,060	5,075	5,510	6,525	725	870	1,160	-	0.49
TW40 (weiss)	0 - 0.16	0.8 - 2.4	3,625	4,350	5,075	6,525	725	870	1,160	-	0.47

CHANNEL-MORTAR

PAGEL-CHANNEL-MORTAR

Channel and waste water range high resistance against strong chemical attack resistant to sulfate attack (industry) and ammonium attack (agriculture) sprayable plastic-strengthened water impermeable

Channel pipes Sewage plants Waste water collecting tank



- KA05
- KA20

	Grain size inch	Layer thickness inch	Compressive strength psi*				Bending strength psi*			Adhesive strength psi*	Yield strength lbs/ft ³
			1 d	3 d	7 d	28 d	1 d	3 d	28 d		
KA05	0 - 0.02	0.08 - 0.2	1,305	4,060	5,075	7,975	145	725	870	-	0.46
KA20	0 - 0.08	0.24 - 1.6	1,450	5,220	6,525	8,700	290	435	1,305	≥ 290	0.44

Nearly all types of grouts are also available with cements of classes CEM III/A or CEM I HS/NA (free of C₃A),- however, the technical data may vary according to cement type.

MOISTURE BARRIER

CONCRETE PROTECTION


O2A

PAGEL-MOISTURE BARRIER

Impregnation according to OS-A-/OS-B and/or OS-1/OS-2
 cream like, solvent-free, alkali-steadily ready for use
 high penetration depth
 prevents surface protection coatings from getting damp underneath
 unique application
 small consumption

Concrete and cement mortar surfaces
 Façades
 Bridges



	Applications number	Layer thickness inch	Adhesive-strength psi*	Application temperature °F	Application time min.	Yield lbs/ft ²
O2A	1	-	-	+46,4 - +104	unlimited	0.2

PROTECTION PAINT


O2C

PAGEL-PROTECTION PAINT

according to OS-C-/OS-B- and/or OS-4/OS-2
 applicable to moist-damp or dry surfaces
 short waiting periods
 vapor diffusable
 free of solvents
 different RAL-colours

Bridges
 Concrete facades
 Curing agent
 Tunnels
 Dams
 Container



	Applications number	Layer thickness inch	Adhesive-strength psi*	Application temperature °F	Application time min.	Yield (1 application) lbs/ft ²
O2C	2	0.005 - 0.014	≥ 188.5	+46,4 - +104	unlimited	0.24 - 0.29

PROTECTION COATING


O2DE

PAGEL-PROTECTION COATING

according to OS-DII- bzw. OS-5A
 crack bridging (even at -4 °F)
 high elasticity
 vapor diffusable
 free of solvents
 different RAL-colours

Bridges
 Concrete and mortar surfaces
 Tunnels
 Areas of fine cracks



	Applications number	Layer thickness inch	Adhesive-strength psi*	Application temperature °F	Application time min.	Yield (1 application) lbs/ft ²
O2DE	3	0.013 - 0.105	≥ 188.5	+46,4 - +104	unlimited	0.34 - 0.35

CONCRETE PROTECTION

CEMENTSLURRY


PAGELASTIC

D1

according to OS-DI- bzw. OS-5B
high elasticity
crack bridging (even at -4 °F)
vapor diffusable
two-components
water impermeable

Bridges
Concrete and mortar surfaces
Tunnels
Areas of fine cracks
Balconies, terraces, bathrooms
Below tiles and all water retaining structures



	Appli- cations number	Layer thickness inch	Adhesive- strength psi*	Application temperature °F	Application time min.	Yield (1 application) lbs/ft²
D1	2	0.08	≥ 116	+46,4 - +86	120	2.5 - 2.7

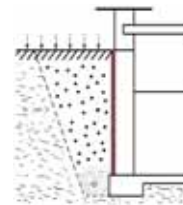
SEAL-SLURRY

PAGEL-SEAL-SLURRY

C1

rigidly
single-component
pump- and sprayable
easy to use

Sealing of earthcontacting construction units,
Wet and damp rooms



	Appli- cations number	Layer thickness inch	Adhesive- strength psi*	Application temperature °F	Application time min.	Yield (2-3 application) lbs/ft²
C1	2 - 3	0.08 - 0.12	≥ 217.5	+46,4 - +86	45 - 60	3.5 - 5.25

CRACK INJECTION

CRACK INJECTION

PAGEL-CEMENT-SUSPENSION - INJECTION-GROUT

ZS10

ZL10

areas of crack and cavities
according to ZTV-RISS
bonding of concrete
single component
high penetration
low viscosity, free flowing
cement based, non shrink

Crack injection
Bonding of concrete surfaces
Filling of cavities
Concrete and masonry



	Grain size µm	width of cracks inch	Compressive strength psi*				Bending strength psi*			Yield lbs/Gal
			1 d	3 d	7 d	28 d	2 d	7 d	28 d	
ZS10	< 16	> 0.008	3,335	3,915	5,510	6,235	290	435	725	10,8
ZL10	< 40	> 0.032	4,060	4,350	5,075	5,945	435	580	725	10,8

FERROUS GRANULATE

INDUSTRIAL FLOORS

P1

PAGEL-PENETRATION SURFACING

"group of hard materials" class M
heavy load range
shock and abrasion resistant
heavy load bearing
rust-free ferrous granulate

Rolling and steel plants
Industrial halls
Storage halls



P1	Grain size inch	Layer thickness inch	Compressive strength psi*				Bending strength psi*			Abrasion cm ³ 50 cm ²	Yield lbs/ft ²
			1 d	3 d	7 d	28 d	1 d	3 d	28 d		
			0 - 0.12	0.12	8,410	11,165	13,485	14,790	870		

INDUSTRIAL FLOOR / ADHESION LAYER

PH10

PAGEL-INDUSTRIAL FLOOR - ADHESION LAYER

PH10/15

for mineral industrial soil coatings
low water cement value
serves in addition as corrosion protection
PH10/15: Basalt addition

Bonding layer for:
Industrial soil coatings
Industrial floorings
Concrete undergrounds



PH10	PH10/15	Grain size inch	Layer thickness inch	Compressive strength psi*				Bending strength psi*			Abrasion cm ³ 50 cm ²	Yield lbs/ft ²
				1 d	3 d	7 d	28 d	1 d	3 d	28 d		
				0 - 0.04	-	-	-	-	-	-		
0 - 0.08	-	-	-	-	-	-	-	-	2.4	0.61 - 1.02		

FERROUS - GRANULATE FLOORING

P2FE

PAGEL-FERROUS GRANULATE FLOORING

"group of hard materials" class M
shock and wear resistant
ready for use, cement-based
sprayable

Ramps
Workshops
Industrial halls
Sinting channel



P2FE	Grain size inch	Layer thickness inch	Compressive strength psi*				Bending strength psi*			Abrasion cm ³ 50 cm ²	Yield lbs/ft ²
			1 d	3 d	7 d	28 d	1 d	3 d	28 d		
			0 - 0.12	0.8 - 1.6	4,785	7,250	8,700	11,600	725		



PAGEL-HARD MATERIAL FLOORING

P22

“group of hard materials” class A
 shock and wear resistant
 ready for use, cement-based
 sprayable

Ramps
 Workshops
 Industrial halls
 Sintering channel



CE PAGEL-SPEZIAL-BETON Wolfsburgstr. 9 · 43355 Essen EN 13813 Erdbeben-, Erdstößen- und Estiche CT C80 F10 A6	Grain size inch	Layer thickness inch	Compressive strength psi*				Bending strength psi*			Abrasion cm ³ 50 cm ²	Yield lbs/ft ² 4.5
			1 d	3 d	7 d	28 d	1 d	3 d	28 d		
			P22	0 – 0.16	0.8 – 1.6	5,510	8,700	9,570	12,180		

STEEL-FIBRE FLOATING

PAGEL-STEEL-FIBRE FLOORING

P3A

though elasticity, ready for use
 shock and wear resistant
P3A/15: Basalt aggregate heatproof,
 shortterm up to 932°F

Rolling and steel plants
 Tank workshops
 Industrial halls
 High temperature areas (**P3A/15**)



P3A/15

CE PAGEL-SPEZIAL-BETON Wolfsburgstr. 9 · 43355 Essen EN 13813 Erdbeben-, Erdstößen- und Estiche CT C80 F10 A9	Grain size inch	Layer thickness inch	Compressive strength psi*				Bending strength psi*			Abrasion cm ³ 50 cm ²	Yield lbs/ft ² 4.5
			1 d	3 d	7 d	28 d	1 d	3 d	28 d		
			P3A	0 – 0.32	0.8 – 3.2	7,250	8,410	11,890	13,630		
P3A/15	0 – 0.2	0.8 – 3.2	7,250	8,120	12,615	14,935	1,160	1,450	1,885	3.0	5.1

SELF LEVELING FLOOR

PAGEL-SELF LEVELING FLOOR

FE20

cement-bound self levelling floor,
 based on portland cement, high tight-
 ness interior and external area,
 high flowability can be walked on after
 3 hours, impervious to water

composite screed for industrial floors
 and balance layers, screed linings for
 living and industrial-buildings,
 Garages, parkingplaces and balconies,
 Terraces, cellar soils



CE PAGEL-SPEZIAL-BETON Wolfsburgstr. 9 · 43355 Essen EN 13813 Erdbeben-, Erdstößen- und Estiche CT C50 F7 A15	Grain size inch	Layer thickness inch	Compressive strength psi*				Bending strength psi*			Abrasion cm ³ 50 cm ²	Yield lbs/ft ² 0.48	
			1 d	3 d	7 d	28 d	1 d	3 d	7 d			28 d
			FE20	0 – 0.08	0.2 – 0.79	3,625	5,075	7,250	8,410			725

PRIMER

RESINS

EH1

PAGEL-EPOXY - RESIN

EH114

EH115

priming
sealing
solidification
adhesion layer
cover sealing

EH1
low viscosity
high penetration
multi purpose unit

dry surface

EH114
fast setting
reacting from +41 °F

low temperatures

EH115
high bonding on moist
subsoil

moist subsoil



	Appli- cation number	Layer thickness inch	Compo- nents	Application temperatur °F	Application time min.	Yield g/m ²
EH1	1	-	2	+0.4 - +86	20 - 75	250 - 500
EH114	1	-	2	+41 - +68	10 - 45	250 - 800
EH115	1	-	2	+0.4 - +86	30 - 75	250 - 500

COATING

EH120

EH130

EH136

PAGEL-EPOXY - COATING

solvent-free
high density
self leveling
weather-proof
abrasion resistant
water-friendly

EH120 THIN COATING
Epoxy based
self leveling, high build coating
pigmented, with aggregate

EH130 FINAL COATING
final resin coating
Coating for concrete and screed underground
pigmented, without aggregate

EH136 SURFACE PROTECTION
Evaporation protection for concrete and mortar
surfaces
transparent or pigmented



	Appli- cation number	Layer thickness inch	Compo- nents	Application temperatur °F	Application time min.	Yield kg/m ²
EH120	1	0.04 - 0.2	2	+0.4 - +86	20 - 50	ca. 1,4
EH130	1	-	2	+0.4 - +86	30 - 60	0.3 - 0.8
EH136	1	-	2	+0.4 - +86	45 - 90	0.2 - 0.5

PAGEL-EPOXY - MORTAR/GROUT

easy to use
abrasion resistant
water impermeable
three-components
(resin/hardener/sand)

EH2 BOXING UP MORTAR

Struts
Bridge bearing
pigmented

EH192 MORTAR

Industrial hall, storage halls, garages,
repair places, transparent

EH192R

Grout
Rail plate, galvanized steel components and
non-iron-metals, precisionbearings



EH2

EH192

EH196R

	Appli- cation number	Layer thickness inch	Compo- nents	Application temperatur °F	Application time min.	Yield lbs/Gal
EH2	1	0.08 – 1.6	3	+50 – +86	20 – 40	ca. 2
EH192	1	0.12 – 1.2	3	+50 – +86	20 – 40	ca. 2
	Grain size inch	Compo- nents	Grouting height inch	Compressive strength psi*	Bending strength psi*	Consump- tion lbs/ft ²
				5 h 12 h 10 d	5 h 12 h 10 d	
EH196R	0,5	2	6 – 100	80 110 140	12 23 > 23	1800

INJECTION

PAGEL-INJECTION-RESIN

solvent-free
low viscously
high compressive and
bonding strength
permanent connection
sea water and waste
water impermeable
high adhesive force
passive behaviour
against steel thixotrop

EH145 INJECTION-RESIN

bonds fire cracks, hard, low viscosity
2-component epoxy-resin

PU245 INJECTION-RESIN

flexible crack-filling
2-component polyurethane-resin

PU246 INJECTION-FOAM

foam developing, without solvents,
blocks water penetration
2-component polyurethane-resin

PU1 ADHESIVE-RESIN

non sag
high bonding strength, seals crack before filling,
2-component polyurethane-resin



EH145

PU245

PU246

PU1

	Appli- cation number	Layer thickness inch	Compo- nents	Application temperatur °F	Application time min.	Yield lbs/Gal
EH145	1	-	2	+50 – +86	app. 45	1.1
PU245	1	-	2	+41 – +86	app. 50	1.1
PU246	1	-	2	+41 – +86	app. 20	1.2
PU1	1	-	2	+50 – +86	app. 15	1,500*

* 1 mm high

O1

PAGEL-CURING MEMBRANE

protects surfaces against premature water evaporation
 provides for slower draining of the concrete, screed and mortar,
 forms water vapour-close film
 prevents crack formation

Concrete and mortar surfaces
 Cement of screeds
 Concrete blocks and finished units
 dams and heavy structures



	Appli- cation number	Layer thickness inch	Barrier- coefficient %	Application temperatur °F	Application time min.	Yield lbs/ft ²
O1	1	-	85	+41 - +86	-	0.2

BONDING ADDITIVE

M1K

PAGEL-BONDING ADDITIVE

dispersion with high bonding strength
 improves bending strength
 smooth application
 surface protection

Bonding-primer
 self-leveling floor
 Mortar
 Concrete



	Appli- cation number	Layer thickness inch	Adhesive strength psi*	Application temperatur °F	Application time min.	Yield lbs/ft ²
M1K	-	-	435	+41 - +86	-	0.2 - 1.0

* one N/mm² = 145 psi

PAGEL-QUICK-REPAIR MORTAR

B1

areas of installation
easy to use
quick setting
load bearing
ready for use
waterproof
B1: 5 min.

Fillings of e.g. anchorages
Repair of water break-throughs
filling of holes
Sealings
Assembly
filler for plugholes



	Grain size inch	Layer thickness inch	Compressive strength psi*				Bending strength psi*			Adhesive Yield strength psi* lbs/ft ²	
			1 h	2 h	1 d	7 d	1 d	3 d	28 d	psi*	lbs/ft ²
B1	-	-	870	870	1,450	7,250	-	-	-	-	2

CONSTRUCTION AND TILE ADHESIVE

PAGEL-CONSTRUCTION AND TILE ADHESIVE

R34

high bond strength and good flexibility
multi-purpose use
water- / frost resistant

Wall and floor areas
solid foam
Isolation- and protection covering



R34W: white
R34S: fast setting

R34W

R34S

	Appli- cation number	Layer thickness inch	Adhesive strength psi*	Application temperatur °F	Application time min.	Yield lbs/ft ²
R34	1	0.04 - 0.12	≥217.5	+41 - +86	45	2
R34W	1	0.04 - 0.12	≥217.5	+41 - +86	45	2
R34S	1	0.04 - 0.12	≥217.5	+41 - +86	20	2



* one N/mm² = 145 psi

PAGEL CONCRETE REPAIR SYSTEMS

ZTV-ING 90 LIST OF BUILDING RULES PART A/2 / RiLi-SiB / ZTV-W

Appli- cation	System application and product name	Test- certificate no.	Agreement- certifikat no.	Expiry- date
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PCC/SPCC-MORTAR-SYSTEMS

PCC I	MHO2	CORROSION PROTECTION AND ADHESION LAYER	MKB MHB			
	MH20	PCC-I-MORTAR(0 – 2 mm)	WM	P VII.1/25202/8-1	01/2188-1-50-V1	31.03.11
	MH80	PCC-I-MORTAR (0 – 8 mm)	WM	P 2141/01-110	01/2141-01-110-93-V1	17.09.10
PCC II	MSO2	CORROSION PROTECTION AND ADHESION LAYER	MKB MHB	P VII.1/25203/6	00/2188-45-V1	20.03.09
	MS 20	PCC-MORTAR (0 – 2 mm)	WM			
	MSO5	PCC-SCREEDING COMPOUND	FS			
PCCII/M3	PAGEL CONSTRUCTION-MORTAR					
	MHO2	CORROSION PROTECTION AND ADHESION LAYER	MKB MHB			
	M3	CONSTRUKTION-MORTAR (0 – 2 mm)	WM	P 2334/02-159	03/2334/02-159-145	12.12.08
SPCC	WET- and DRY-spraying			P 2255/00-91	00/2255/00-71-67-V1	03.09.10
	MSO2	CORROSION PROTECTION	MKB			
	SP20	SPCC-MORTAR (0 – 2 mm)	WM			
	DRY-spraying			P 2551/01-130	01/2551/01-130-122	09.12.11
	MSO2	CORROSION PROTECTION	MKB			
	SP40	SPCC-MORTAR (0 – 4 mm)	WM			

CONCRETE PROTECTION-SYSTEM

OS-A	O2A	HYDROPHOBATION	H	P 1860/99-10	00/1860/99-10-46-V1	24.08.09
OS-B	O2A	HYDROPHOBATION	H	P 1860/99-34	00/1860/99-34-47	26.10.09
	O2C	PROTECTION PAINT	OS			
OS-C	MSO5	PCC-SCREEDING COMPOUND	FS	P 1860/99-35	00/1860/99-35-48	26.10.09
	O2C	PROTECTION PAINT	OS			
OS-DI	D1	PAGELASTIC	OS	P 2333/00-99	00/2333/00-99-69-V1	24.09.10
OS-DII	MSO5	PCC-SCREEDING COMPOUND	FS	P 1860/99-36	00/1860/99-36-49	26.10.09
	O2DE	PROTECTION COATING	OS			

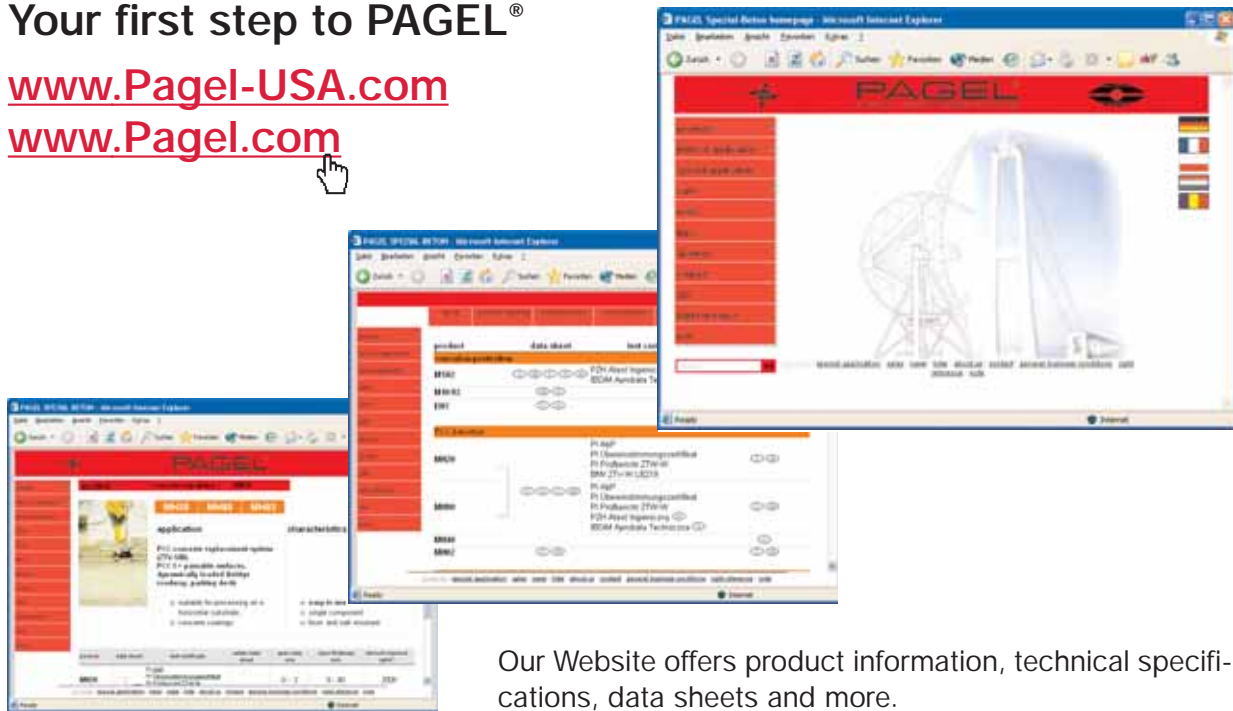
ZTV - W

SPCC	SP20	SPCC-MORTAR	WM	2936		09.2010
	SP40	SPCC-MORTAR	WM	2936		12.2011
PCC	MS 20	PCC-MORTAR (0 – 2 mm)	WM	2936		04.2009
	MH20	PCC-MORTAR (0 – 2 mm)	WM	2936		03.2011
	MH80	PCC-MORTAR (0 – 8 mm)	WM	2936		09.2010
PAGEL CONSTRUCTION-MORTAR						
	MHO2	CORROSION PROTECTION AND ADHESION LAYER	MKB MHB			
	M3	CONSTRUKTION-MORTAR (0 – 2 mm)	WM	P 2334/02-159	03/2334/02-159-145	12.12.08

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For general questions or support regarding concrete your projects, please do not hesitate to contact us.



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