Datasheet

POLY-GPG PLUS
Hars voor multimaterialen met plaatsingsindicatie

Dit chemisch verankeringshars POLY-GPG Plus is geschikt voor 100% van de courante toepassingen op hol en vol metselwerk. Het kan veilig binnen worden gebruikt (COV A+) en waarborgt een eenvoudige en perfecte bevestiging dankzij een exclusieve innovatie: de plaatsingsindicatie Simpson Strong-Tie.

BINNEN

BUITEN

Kenmerken

Materiaal

- Methacrylaathars,
- Draadstang LMAS : elektrolytisch verzinkt en roestvrij staal.

Voordelen

- Peeler-systeem : eenvoudig en snel te gebruiken,
- Vrij van gevaarlijke bestanddelen, zonder styreen en reukloos,
- Zonder waarschuwingssymbolen en veiligheidswaarschuwingen,
- Opslag in ruimte voor onbrandbare producten,
- Het (al dan niet gebruikte) harspatroon kan weggegooid worden met ongevaarlijk afval.

Toepassingen

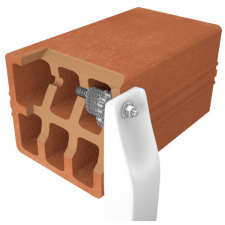
Ondergrond

- Baksteen,
- Bouwsteen,
- Cellenbeton.

Toepassingsgebieden

- Rolluiken, Scharnieren voor luiken/poorten, antennes,
- Sanitair, radiatoren, airconditioners,
- Leuningen/hekwerk.

Fixation d'une rampe d'escalier



Datasheet

POLY-GPG PLUS
Hars voor multimaterialen met plaatsingsindicatie

Technische gegevens

Références

Referentie	Product information				
	Grey color	Beige color	Content [ml]	Weigth [kg]	Packaging qty [pcs]
POLYGPG+300G-FR	x	-	300	0.579	12
POLYGPG+300B-FR	-	x	300	0.579	12

Design resistance – Tension – NRd [kN] – Carbon steel 5.8

Referentie	Design resistance – N_{Rd} – Carbon steel 5.8 [kN]							
	Non-cracked concrete							
	h_{ef} = 8d				h_{ef} = 12d			
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60
POLY-GPG PLUS + LMAS M8	6.3	6.3	6.3	6.3	9.4	9.4	9.4	9.4
POLY-GPG PLUS + LMAS M10	9.8	9.8	9.8	9.8	14.7	14.7	14.7	14.7
POLY-GPG PLUS + LMAS M12	13.1	13.1	13.1	13.1	19.6	19.6	19.6	19.6
POLY-GPG PLUS + LMAS M16	19.9	19.9	19.9	19.9	29.9	29.9	29.9	29.9
POLY-GPG PLUS + LMAS M20	28.7	28.7	28.7	28.7	43.1	43.1	43.1	43.1
POLY-GPG PLUS + LMAS M24	37.9	37.9	37.9	37.9	56.8	56.8	56.8	56.8

Concrete :
1. The design loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing s ≥ 15 cm (any diameter) or with a rebar spacing s ≥ 10 cm, if the rebar diameter is 10mm or smaller.
2. The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges (c ≤ max [10 hef; 60d]) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
3. Concrete is considered non-cracked when the tensile stress within the concrete is\sigmaL +\sigmaR ≤ 0. In the absence of detailed verification\sigmaR = 3 N/mm² can be assumed (\sigmaL equals the tensile stress within the concrete induced by external loads, anchors loads included).

Design resistance – Tension – NRd [kN] – Stainless steel A4-70

Referentie	Design resistance – N_{Rd} – Stainless steel A4-70 [kN]							
	Non-cracked concrete							
	h_{ef} = 8d				h_{ef} = 12d			
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60
POLY-GPG PLUS + LMAS M8	6.3	6.3	6.3	6.3	9.4	9.4	9.4	9.4
POLY-GPG PLUS + LMAS M10	9.8	9.8	9.8	9.8	14.7	14.7	14.7	14.7
POLY-GPG PLUS + LMAS M12	13.1	13.1	13.1	13.1	19.6	19.6	19.6	19.6
POLY-GPG PLUS + LMAS M16	19.9	19.9	19.9	19.9	29.9	29.9	29.9	29.9
POLY-GPG PLUS + LMAS M20	28.7	28.7	28.7	28.7	43.1	43.1	43.1	43.1
POLY-GPG PLUS + LMAS M24	37.9	37.9	37.9	37.9	56.8	56.8	56.8	56.8

Concrete :
1. The design loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing s ≥ 15 cm (any diameter) or with a rebar spacing s ≥ 10 cm, if the rebar diameter is 10mm or smaller.
2. The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges (c ≤ max [10 hef; 60d]) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
3. Concrete is considered non-cracked when the tensile stress within the concrete is\sigmaL +\sigmaR ≤ 0. In the absence of detailed verification\sigmaR = 3 N/mm² can be assumed (\sigmaL equals the tensile stress within the concrete induced by external loads, anchors loads included).

Design resistance – Shear – VRd [kN] – Carbon steel 5.8

Referentie	Design resistance – V_{Rd} – Carbon steel 5.8 [kN]							
	Non-cracked concrete							
	h_{ef} = 8d				h_{ef} = 12d			
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60
POLY-GPG PLUS + LMAS M8	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
POLY-GPG PLUS + LMAS M10	12	12	12	12	12	12	12	12
POLY-GPG PLUS + LMAS M12	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8
POLY-GPG PLUS + LMAS M16	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2
POLY-GPG PLUS + LMAS M20	48.8	48.8	48.8	48.8	48.8	48.8	48.8	48.8
POLY-GPG PLUS + LMAS M24	70.4	70.4	70.4	70.4	70.4	70.4	70.4	70.4

Concrete :
1. The design loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing s ≥ 15 cm (any diameter) or with a rebar spacing s ≥ 10 cm, if the rebar diameter is 10mm or smaller.
2. The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges (c ≤ max [10 hef; 60d]) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
3. Concrete is considered non-cracked when the tensile stress within the concrete is\sigmaL +\sigmaR ≤ 0. In the absence of detailed verification\sigmaR = 3 N/mm² can be assumed (\sigmaL equals the tensile stress within the concrete induced by external loads, anchors loads included).

Design resistance – Shear – VRd [kN] – Stainless steel A4-70

Referentie	Design resistance – V_{Rd} – Stainsteel A4-70 [kN]							
	Non-cracked concrete							
	h_{ef} = 8d				h_{ef} = 12d			
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60
POLY-GPG PLUS + LMAS M8	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
POLY-GPG PLUS + LMAS M10	12.8	12.8	12.8	12.8	12.8	12.8	12.8	12.8
POLY-GPG PLUS + LMAS M12	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2
POLY-GPG PLUS + LMAS M16	35.3	35.3	35.3	35.3	35.3	35.3	35.3	35.3
POLY-GPG PLUS + LMAS M20	55.1	55.1	55.1	55.1	55.1	55.1	55.1	55.1
POLY-GPG PLUS + LMAS M24	79.5	79.5	79.5	79.5	79.5	79.5	79.5	79.5

Concrete :
1. The design loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing s ≥ 15 cm (any diameter) or with a rebar spacing s ≥ 10 cm, if the rebar diameter is 10mm or smaller.
2. The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges (c ≤ max [10 hef; 60d]) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
3. Concrete is considered non-cracked when the tensile stress within the concrete is\sigmaL +\sigmaR ≤ 0. In the absence of detailed verification\sigmaR = 3 N/mm² can be assumed (\sigmaL equals the tensile stress within the concrete induced by external loads, anchors loads included).

Design resistance – Bending moment – MRd [Nm] – Concrete

Referentie	Design resistance – Bending moment – M_{Rd} – Concrete [Nm]	
	Carbon steel 5.8	Stainless steel A4-70
POLY-GPG PLUS + LMAS M8	15.2	16.7
POLY-GPG PLUS + LMAS M10	29.6	33.3
POLY-GPG PLUS + LMAS M12	52	60.9
POLY-GPG PLUS + LMAS M16	132.8	148.7
POLY-GPG PLUS + LMAS M20	259.2	291
POLY-GPG PLUS + LMAS M24	448	502.6

Concrete :
1. The design loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing s ≥ 15 cm (any diameter) or with a rebar spacing s ≥ 10 cm, if the rebar diameter is 10mm or smaller.
2. The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges (c ≤ max [10 hef; 60d]) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
3. Concrete is considered non-cracked when the tensile stress within the concrete is\sigmaL +\sigmaR ≤ 0. In the absence of detailed verification\sigmaR = 3 N/mm² can be assumed (\sigmaL equals the tensile stress within the concrete induced by external loads, anchors loads included).

Datasheet

POLY-GPG PLUS
Hars voor multimaterialen met plaatsingsindicatie

Design resistance – hef = 80 mm (≤ M8) or 85 mm (≥ M10) – Carbon steel ≥ 4.6 / Stainless steel ≥ A2-70

Referentie	Design resistance – Carbon steel ≥ 4.6 / stainless steel ≥ A2-70			
	h_{ef} = 80 mm (≤ M8) or 85 mm (≥ M10)			
	Tension - N_{Rd} [kN]		Shear - V_{Rd} [kN]	
	Solid Clay Masonry	Hollow Masonry	Solid Clay Masonry	Hollow Masonry
POLY-GPG PLUS + LMAS M6	1.6	0.3	0.8	0.6
POLY-GPG PLUS + LMAS M8	1.6	0.3	0.8	0.6
POLY-GPG PLUS + LMAS M10	2	0.6	2.4	0.6
POLY-GPG PLUS + LMAS M12	2	0.6	2.4	0.6

Masonry :

	Compressive strength f_b [N/mm²]	Bulk density ρ [kg/m^3]
Solid clay masonry	≥ 18	≥ 1600
Hollow masonry	≥ 6	≥ 900

1. The design resistances have been calculated using the partial safety factors for resistances stated in ETA-approval(s).
2. The recommended loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s) and with a partial safety factor for actions of γF=1.4.
3. For combined tension and shear loads or anchor groups and/or in case of edge influence, a calculation acc. TR 054, design method A shall be performed. For details see ETA - assessment(s)
4. Temperature range: -40°C/+40°C (Tmlp = +24°C)
5. Coefficiant factor β for in situ tests acc. ETAG 029 see ETA-19/XXXX; Annex C2
6. Displacements under service load see ETA-19/0420; Annex C2 & C3

POLY-GPG PLUS
Hars voor multimaterialen met plaatsingsindicatie

Design resistance – Bending moment – MRd [Nm] – Masonry

Referentie	Design resistance – Bending moment – M_{Rd} – Masonry [Nm]		
	Carbon steel 5.8	Carbon steel 8.8	Stainless steel A4-70
POLY-GPG PLUS + LMAS M6	6.4	9.6	7.1
POLY-GPG PLUS + LMAS M8	15.2	24	16.7
POLY-GPG PLUS + LMAS M10	29.6	48	33.3
POLY-GPG PLUS + LMAS M12	52.8	84	59

Masonry :

	Compressive strength f_b [N/mm²]	Bulk density ρ [kg/m^3]
Solid clay masonry	≥ 18	≥ 1600
Hollow masonry	≥ 6	≥ 900

1. The design resistances have been calculated using the partial safety factors for resistances stated in ETA-approval(s).
2. The recommended loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s) and with a partial safety factor for actions of γF=1.4.
3. For combined tension and shear loads or anchor groups and/or in case of edge influence, a calculation acc. TR 054, design method A shall be performed. For details see ETA - assessment(s)
4. Temperature range: -40°C/+40°C (Tmlp = +24°C)
5. Coefficiant factor β for in situ tests acc. ETAG 029 see ETA-19/XXXX; Annex C2
6. Displacements under service load see ETA-19/0420; Annex C2 & C3

Design resistance – Tension – NRd [kN] – Rebar

Referentie	Design resistance – N_{Rd} – Rebar [kN]							
	Non-cracked concrete							
	h_{ef} = 8d				h_{ef} = 12d			
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60
POLY-GPG PLUS + Ø8	4.9	4.9	4.9	4.9	7.4	7.4	7.4	7.4
POLY-GPG PLUS + Ø10	7.7	7.7	8.4	8.4	11.5	11.5	12.7	12.7
POLY-GPG PLUS + Ø12	11.1	12.2	12.2	13.3	16.6	18.2	18.2	19.9
POLY-GPG PLUS + Ø16	15.3	16.8	16.8	18.4	23	25.3	25.3	27.6
POLY-GPG PLUS + Ø20	23.9	26.3	26.3	28.7	35.9	39.5	39.5	43.1
POLY-GPG PLUS + Ø25	37.4	41.1	44.9	48.6	53.8	59.2	64.6	70

Design resistance – Shear – VRd [kN] – Rebar

Referentie	Design resistance – V_{Rd} – Rebar [kN]							
	Non-cracked concrete							
	h_{ef} = 8d				h_{ef} = 12d			
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60
POLY-GPG PLUS + Ø8	9	9	9	9	9	9	9	9
POLY-GPG PLUS + Ø10	14.2	14.2	14.2	14.2	14.2	14.2	14.2	14.2
POLY-GPG PLUS + Ø12	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3
POLY-GPG PLUS + Ø16	36.2	36.2	36.2	36.2	36.2	36.2	36.2	36.2
POLY-GPG PLUS + Ø20	56.5	56.5	56.5	56.5	56.5	56.5	56.5	56.5
POLY-GPG PLUS + Ø25	88.4	88.4	88.4	88.4	88.4	88.4	88.4	88.4

POLY-GPG PLUS
Hars voor multimaterialen met plaatsingsindicatie

Design resistance – Bending moment – MRd [Nm] – Rebar

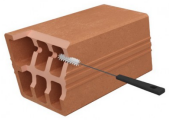
Referentie	Design resistance – Bending moment – M_{Rd} [Nm]
POLY-GPG PLUS + Ø8	21.6
POLY-GPG PLUS + Ø10	42.3
POLY-GPG PLUS + Ø12	73.5
POLY-GPG PLUS + Ø16	173.7
POLY-GPG PLUS + Ø20	339.1
POLY-GPG PLUS + Ø25	662.7

Plaatsing

Plaatsingstijd

Temperatuur [°C]	-5	0	5	10	20	30
Verwerkingstijd	2.15	1.15	8min	5.30min	2min	1min
Belastbaar na	4.00	2.00	1.00	50min	30min	15min

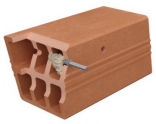
1. Gat boren.



2. Schoonborstelen.

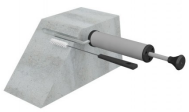
3. Zeefhuls insteken.

4. Vullen vanaf bodemgat naar buiten door bij het pompen telkens één maatstreep op de spuitmond achteruit te gaan.



5. Ankerstang licht draaiend insteken.

1. Gat boren.



2. Boorgat reinigen door uitborstelen en uitblazen zoals aangegeven op de patroon.

3. Gat voor de helft tot twee derde vullen vanaf het bodemgat naar buiten door bij het pompen telkens één maatstreep op de spuitmond achteruit te gaan.

4. Draadstang insteken door langzaam van links naar rechts te draaien. U kunt de draadstang verplaatsen of hars toevoegen zolang de verwerkingstijd niet bereikt is.

5. Vastzetten na het bereiken van de uithardingstijd.

Installation parameters – Concrete

Referentie	Installation parameters – Concrete					
	Ø drilling [d_0] [mm]	Max. fixture hole Ø [d_f] [mm]	Drilling depth (8d) [h_0=h_{ef}=8d] [mm]	Drilling depth (12d) [h_0=h_{ef}=12d] [mm]	Wrench size [SW]	Installation torque [T_{inst}] [Nm]
POLY-GPG PLUS + LMAS M8	10	9	64	96	13	10
POLY-GPG PLUS + LMAS M10	12	12	80	120	17	12
POLY-GPG PLUS + LMAS M12	14	14	96	144	19	20
POLY-GPG PLUS + LMAS M16	18	18	128	196	24	40
POLY-GPG PLUS + LMAS M20	24	22	160	240	30	70
POLY-GPG PLUS + LMAS M24	28	26	192	288	36	90

Spacing, edge distances and member thickness – Concrete

Referentie	Spacing, edge distance and member thickness - Concrete									
	Effective embedment depth (8d) [$h_{ef,8d}$] [mm]	Characteristic spacing for $h_{ef,8d}$ [$S_{cr,N}$] [mm]	Characteristic edge distance for $h_{ef,8d}$ [$c_{cr,N}$] [mm]	Min. member thickness for $h_{ef,8d}$ [h_{min}] [mm]	Effective embedment depth (12d) [$h_{ef,12d}$] [mm]	Characteristic spacing for $h_{ef,12d}$ [$S_{cr,N}$] [mm]	Characteristic edge distance for $h_{ef,12d}$ [$c_{cr,N}$] [mm]	Min. member thickness for $h_{ef,12d}$ [h_{min}] [mm]	Min. spacing [S_{min}] [mm]	Min. edge distance [C_{min}] [mm]
POLY-GPG PLUS + LMAS M8	64	192	96	100	96	288	144	126	40	40
POLY-GPG PLUS + LMAS M10	80	240	120	110	120	360	180	150	50	50
POLY-GPG PLUS + LMAS M12	96	288	144	126	144	432	216	174	60	60
POLY-GPG PLUS + LMAS M16	128	384	192	158	196	588	294	226	80	80
POLY-GPG PLUS + LMAS M20	160	480	240	190	240	720	360	270	100	100
POLY-GPG PLUS + LMAS M24	192	576	288	222	288	864	432	318	120	120

Installation parameters – Masonry – Solid clay masonry

Referentie	Installation parameters – Solid clay masonry				
	Ø drilling [d_0] [mm]	Max. fixture hole Ø [d_f] [mm]	Drilling depth [h_1] [mm]	Embedment depth [h_{ef}] [mm]	Installation torque [T_{inst}] [Nm]
POLY-GPG PLUS + LMAS M6	8	7	85	80	1
POLY-GPG PLUS + LMAS M8	10	9	85	80	1
POLY-GPG PLUS + LMAS M10	12	12	90	85	1
POLY-GPG PLUS + LMAS M12	14	14	90	85	1

Installation parameters – Masonry – Hollow masonry

Referentie	Installation parameters - Hollow masonry				
	Ø drilling [d_0] [mm]	Max. fixture hole Ø [d_f] [mm]	Drilling depth [h_1] [mm]	Embedment depth [h_{ef}] [mm]	Installation torque [T_{inst}] [Nm]
POLY-GPG PLUS + LMAS M6	12	7	85	80	2
POLY-GPG PLUS + LMAS M8	12	9	85	80	2
POLY-GPG PLUS + LMAS M10	16	12	90	85	2
POLY-GPG PLUS + LMAS M12	16	14	90	85	2

Spacing, edge distances and member thickness – Masonry – Solid clay masonry

Referentie	Spacing, edge distance and member thickness – Solid clay masonry			
	Min. spacing [S_{min}] [mm]			Min. edge distance [C_{min}] [mm]
	$s_{cr,N} = s_{min}$ [mm]	$s_{cr,N}$ II = s_{min} II	$s_{cr,N}{}^{T} = s_{min}{}^{T}$ [mm]	$c_{cr,N} = c_{min}$ [mm]
POLY-GPG PLUS + LMAS M6	240	-	-	120
POLY-GPG PLUS + LMAS M8	240	-	-	120
POLY-GPG PLUS + LMAS M10	255	-	-	127.5
POLY-GPG PLUS + LMAS M12	255	-	-	127.5

Spacing, edge distances and member thickness – Masonry – Hollow masonry

Referentie	Spacing, edge distance and member thickness – Hollow masonry			
	Min. spacing [S_{min}] [mm]			Min. edge distance [C_{min}] [mm]
	$s_{cr,N} = s_{min}$ [mm]	$s_{cr,N}$ II = s_{min} II [mm]	$s_{cr,N}{}^{T} = s_{min}{}^{T}$ [mm]	$c_{cr,N} = c_{min}$ [mm]
POLY-GPG PLUS + LMAS M6	-	250	120	100
POLY-GPG PLUS + LMAS M8	-	250	120	100
POLY-GPG PLUS + LMAS M10	-	250	120	100
POLY-GPG PLUS + LMAS M12	-	250	120	100

POLY-GPG PLUS
Hars voor multimaterialen met plaatsingsindicatie

Installation parameters – Rebar

Referentie	Installation parameters – Rebar		
	Ø drilling [d_0] [mm]	Drilling depth (8d) [h_0=h_{ef}=8d] [mm]	Drilling depth (12d) [h_0=h_{ef}=12d] [mm]
POLY-GPG PLUS + Ø8	12	64	96
POLY-GPG PLUS + Ø10	14	80	120
POLY-GPG PLUS + Ø12	16	96	144
POLY-GPG PLUS + Ø16	20	128	192
POLY-GPG PLUS + Ø20	25	160	240
POLY-GPG PLUS + Ø25	32	200	288

Spacing, edge distances and member thickness – Rebar

Referentie	Spacing, edge distance and member thickness – Rebar									
	Effective embedment depth (8d) [$h_{ef,8d}$] [mm]	Characteristic spacing for $h_{ef,8d}$ [$S_{cr,N}$] [mm]	Characteristic edge distance for $h_{ef,8d}$ [$c_{cr,N}$] [mm]	Min. member thickness for $h_{ef,8d}$ [h_{min}] [mm]	Effective embedment depth (12d) [$h_{ef,12d}$] [mm]	Characteristic spacing for $h_{ef,12d}$ [$S_{cr,N}$] [mm]	Characteristic edge distance for $h_{ef,12d}$ [$c_{cr,N}$] [mm]	Min. member thickness for $h_{ef,12d}$ [h_{min}] [mm]	Min. spacing [S_{min}] [mm]	Min. edge distance [C_{min}] [mm]
POLY-GPG PLUS + Ø8	64	192	96	100	96	288	144	126	40	40
POLY-GPG PLUS + Ø10	80	240	120	110	120	360	180	150	50	50
POLY-GPG PLUS + Ø12	96	288	144	126	144	432	216	174	60	60
POLY-GPG PLUS + Ø16	128	384	192	168	192	576	288	232	80	80
POLY-GPG PLUS + Ø20	160	480	240	210	240	720	360	290	100	100
POLY-GPG PLUS + Ø25	200	600	300	264	288	864	432	352	120	120