

Declaration of Performance 0756-CPD-0509

valid from LOT no: see final page of this document

MIT-SE Plus bonded anchor

(Bonded anchor with anchor rod of sizes M8-M12 for use in masonry)

Intended use or uses of the construction product according to ETAG 029				
Generic type	Bonded anchor for anchorage of threaded rod.			
Base material	Mortar strength min. M2,5 according to EN 998-2:2010			
	Name	Standard	Min size [mm]	Bulk density class ρ [kg/dm ³]
Basematerial 1 use category "b"	Solid calcium silicate masonry KSV-NF	KSV-NF; EN 771-1	240x115x71	$\geq 1,8$
Basematerial 2 use category "b"	Solid clay masonry Mz – NF	Mz – NF; EN 771-1	240x115x71	$\geq 1,8$
Basematerial 3 use category "c"	Hollow calcium silicate masonry KSL-R-12-1,2-16DF	KSL-R-12-1,2-16DF; EN 771-1	498x240x240	$\geq 1,2$
Basematerial 4 use category "c"	Hollow calcium silicate masonry KSL-12-1,2-16DF	KSL-12-1,2-16DF; EN 771-2	498x240x238	$\geq 1,2$
Basematerial 5 use category "c"	Perforated clay masonry Hlz=12=0,8-xxDF	Hlz=12=0,8-xxDF; Z-17.1-383	373x365x238	$\geq 0,8$
Basematerial 6 use category "c"	Perforated clay masonry Hlz=12-0.9-16DF N+F	Hlz=12-0.9-16DF N+F; EN 771-1	490x240x238	$\geq 0,9$
Durability	internal dry conditions and atmospheric exposure (stainless steel only)			
Loading	static, quasi-static			
Service temperature range	Temperature range I: -40°C to +40°C (max. short term temperature +40°C and max. long term temperature +24°C), Temperature range II: -40°C to +80°C (max. short term temperature +80°C and max. long term temperature +50°C).			
Use category	ETAG 029, b,c, and w/w. Masonry material, category b,c and w/w: all diameters. Perforation with hammer drilling machine.			
Fire Resistance	-			
Fire Reaction	-			
ETA – 12/0544 issued by	Deutsches Institut für Bautechnik DIBt, Berlin			
On the basis of	ETAG 029			
Certificate of Conformity 0756-CPD-0809 issued by	Institut für Massivbau, Darmstadt			
Under AVCP System	1			

Declared performances for threaded rod M8-M12

Declared performances according to ETAG 029						
Essential characteristics			Performance			
			M8	M8IG	M10	M12
Installation parameters						
d	Diameter of thread diameter	[mm]	8	10	10	10
d ₀	Nominal diameter of drill bit (solid masonry w/o sleeve)	[mm]	10	12		
	Nominal diameter of drill bit (solid + hollow masonry with sleeve)	[mm]	14	16		
d _f	Diameter of clearance hole in the fixture	[mm]	9	14	12	14
h _{eff}	Effective anchorage depth	[mm]	80	90		
h ₁	Depth of the drilling hole (solid masonry w/o sleeve)	[mm]	85	95		
	Depth of the drilling hole (solid + hollow masonry)	[mm]	105			
T _{inst}	Nominal torque moment	[Nm]	2			
t _{fix}	Minimum thickness to be fixed	[mm]	20			
	Maximum thickness to be fixed	[mm]	420	410		
C _{min}	Minimum edge distance	Basematerial 1	[mm]	50		
		Basematerial 2		50		
		Basematerial 3		100		
		Basematerial 4		100		
		Basematerial 5		100		
		Basematerial 6		100		
S _{min}	Minimum spacing distance	Basematerial 1	[mm]	50		
		Basematerial 2		50		
		Basematerial 3		100		
		Basematerial 4		100		
		Basematerial 5		100		
		Basematerial 6		100		
S _{cr}	Critical spacing distance	Basematerial 1	[mm]	160	200	
		Basematerial 2		160	200	
		Basematerial 3		498		
		Basematerial 4		498		
		Basematerial 5		373		
		Basematerial 6		498		
M _{Rk,s}	Characteristic bending moment, property class 5.8	[Nm]	19	37		
Y _{Ms,V}	Partial safety factor		1.25			
M _{Rk,s}	Characteristic bending moment, property class A4-70	[Nm]	26	52		
Y _{Ms,V}	Partial safety factor		1.56			

Displacement under shear and tension Load						
Basematerial no	N [kN]	δ_{N0} [mm]	$\delta_{N\infty}$ [mm]	V [kN]	δ_{V0} [mm]	$\delta_{V\infty}$ [mm]
1	$N_{Rk} / (1,4 \times \gamma_M)$	0.1	0.2	$V_{Rk} / (1,4 \times \gamma_M)$	$V_{Rk} / [kN]$	$1.5 \delta_{V0}$
2					$(2 [kN/mm])$	
3					0.7	1.1
4						
5						
6						

Characteristic values for tension and shear loads												
Base mat. no	Density ρ [kg/dm ³] compressive strength f_b [N/mm ²]	Sleeve	Anchor size	h_{eff} [mm]	Characteristic resistance							
					Use category							
					dry / dry				wet / wet			
					24°C/40°C		50°C/80°C		24°C/40°C		50°C/80°C	
					N_{Rk}	V_{Rk}	N_{Rk}	V_{Rk}	N_{Rk}	V_{Rk}	N_{Rk}	V_{Rk}
					[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	[kN]	
1	$P \geq 1.8$ $f_b \geq 8$	without	M8	80	4.0	4	3.0	3.0	3.0	3.0	2.5	2.5
		without	M8 IG; M10 M12	90	5.0	5.0	4.5	4.5	4.0	4.0	3.5	3.5
		SH13x100	M8	80	5.0	5.0	4.5	4.5	4.5	4.5	3.5	3.5
		SH15x100	M8 IG; M10 M12	90	7.0	7.0	6.0	6.0	5.0	5.0	4.5	4.5
2	$P \geq 1.8$ $f_b \geq 12$	without	M8	80	4.0	4.0	3.0	3.0	3.5	3.5	3.0	3.0
		without	M8 IG; M10 M12	90	5.0	5.0	4.5	4.5	5.0	5.0	4.0	4.0
		SH13x100	M8	80	3.5	3.5	3.0	3.0	3.5	3.5	2.5	2.5
		SH15x100	M8 IG; M10 M12	90	4.5	4.5	3.5	3.5	4.5	4.5	3.5	3.5
3	$P \geq 1.2$ $f_b \geq 12$	SH13x100	M8	80	3.5	2.5	3.5	2.5	3.0	2.0	3.0	2.0
4	$P \geq 1.2$ $f_b \geq 12$	SH13x100	M8	80	2.5	2.0	2.5	2.0	2.0	1.5	2.0	1.5
		SH15x100	M8 IG; M10 M12	90	3	2.5	3.0	2.5	2.0	2.0	2.0	2.0
5	$P \geq 0.8$ $f_b \geq 12$	SH13x100	M8	80	2	2.0	2.0	2.0	2.0	2.0	2.0	2.0
		SH15x100	M8 IG; M10 M12	90	2	2.5	2.0	2.5	2.0	2.5	2.0	2.5
6	$P \geq 0.9$ $f_b \geq 12$	SH13x100	M8	80	3	2.0	3.0	2	2.5	2.0	2.5	2.0
Partial safety factor γ_m					2.5							

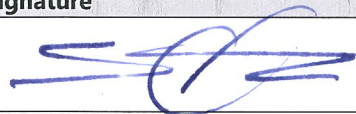
The below performances apply for the following article numbers:

Content	Art Nr	LOT nr
165ml	1710024	029_2/2014
	17100246	046_2/2014
300ml	1710017	148_6/2014; 170_7/2014
	17100170	115_5/2014
	17100171	148_6/2014
	17100175	056_3/2014
	17100176	-
	1710102	-
350ml	1710025	147_12/2014; 119_11/2014; 147_12/2014
	17100251	
	17100256	
	1710118	
400ml	1710013	
	1710026	043_8/2014
	17100260	043_8/2014; 168_1/2015
	17100261	161_2/2014
	171002601	263_4/2014
825ml	1710022	144_12/2014; 165_12/2013

The performances of the product identified in the declaration of performance are in conformity with the declared performance, only if a 3.1 steel-mill certificate can be provided for each production LOT of threaded bar that has been used in combination with the bonded anchor.

This declaration of performance is issued under the sole responsibility of Mungo AG.

Signed for and on behalf of the manufacturer by:

Name and functions	Place and date of issue	Signature
Arnold Schefer Owner and CEO	Olten, 4.6.2013	

Further information:

Liability for printing errors is excluded. The full content of the corresponding ETA has to be observed.