

# Declaration of Performance 0756-CPD-0532

valid from LOT no: see final page of this document

MIT-SP bonded anchor

(Bonded anchor with anchor rod of sizes M8-M16 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 $\rho$ [kg/dm <sup>3</sup> ]
Basematerial 1 use category "b"	Clay masonry MZ DF	MZ-DF; EN 771-1	240x115x55	$\geq 1,8$
Basematerial 2 use category "b"	Calcium silicate masonry KS20-2-NF	KS 20-2.0-NF; EN771-1	240x115x71	$\geq 2,0$
Basematerial 3 use category "c"	Hollow clay Masonry 16 DF	16 DF; EN 771-1	497x240x240	$\geq 0,9$
Basematerial 4 use category "c"	Hollow calcium silicate masonry KSL-12-1,4-3DF	KSL-12-1,4-3DF; EN 771-1	240x175x113	$\geq 1,4$
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),			
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 – 13/0033 issued by	ZÚS, Technický A Zkušební Ústav Stavební Praha			
On the basis of	ETAG 029			
Certificate of Conformity 0756-CPD-0308 issued by	ZÚS, Technický A Zkušební Ústav Stavební Praha			
Under AVCP System	1			

## Declared performances for threaded rod M8-M12

Declared performances according to ETAG 029							
Essential characteristics			Performance				
			M8	M10	M12	M16	
Installation parameters							
d	Diameter of thread diameter	[mm]	8	10	12	16	
d <sub>0</sub>	Nominal diameter of drill bit (solid masonry w/o sleeve)	[mm]	10	12	14	18	
	Nominal diameter of drill bit (solid + hollow masonry with sleeve)	[mm]	12	16	20	-	
d <sub>f</sub>	Diameter of clearance hole in the fixture	[mm]	9	11	13	17	
h <sub>eff</sub>	Effective anchorage depth (solid masonry w/o sleeve)	[mm]	80	90	100	100	
	Effective anchorage depth (solid + hollow masonry with sleeve)	[mm]	80	85	85	-	
h <sub>1</sub>	Depth of the drilling hole (solid masonry w/o sleeve)	[mm]	80	90	100	100	
	Depth of the drilling hole (solid + hollow masonry)	[mm]	85	90	90	-	
T <sub>inst</sub>	Nominal torque moment	[Nm]	2				
t <sub>fix</sub>	Minimum thickness to be fixed	[mm]	20	20	10	10	
	Maximum thickness to be fixed	[mm]	420	410	400	400	
c <sub>min</sub>	Minimum edge distance	Basematerial 1	[mm]	50	50	50	54
		Basematerial 2		50	50	50	54
		Basematerial 3		100	100	120	-
		Basematerial 4		100	100	120	-
s <sub>min</sub>	Minimum spacing distance	Basematerial 1	[mm]	50	50	50	54
		Basematerial 2		50	50	50	54
		Basematerial 3		100	100	120	-
		Basematerial 4		100	100	120	-
s <sub>cr</sub>	Critical spacing distance	Basematerial 1	[mm]	160	200	240	320
		Basematerial 2		160	200	240	320
		Basematerial 3		497	497	497	-
		Basematerial 4		240	240	240	-
M <sub>Rk,s</sub>	Characteristic bending moment, property class 5.8	[Nm]	19	37	66	166	
γ <sub>Ms,V</sub>	Partial safety factor		1.25				
M <sub>Rk,s</sub>	Characteristic bending moment, property class A4-70	[Nm]	26	52	92	233	
γ <sub>Ms,V</sub>	Partial safety factor		1.56				



Displacement under shear and tension Load								
Base mat. No	Sleeve	Anchor size	Tension			Shear		
			Load	Displacement		Load	Displacement	
			F	$d_{NO}$	$d_{N\Rightarrow}$	F	$d_{NO}$	$d_{N\Rightarrow}$
			[kN]	[mm]		[kN]	[mm]	
1	without	M8	$\frac{N_{Rk}}{1.4 \times \gamma_M}$	0.1	0.2	$\frac{V_{Rk}}{1.4 \times \gamma_M}$	0.4	0.6
	without	M10		0.1	0.2		0.7	1.1
	without	M12		0.2	0.4		0.4	0.7
	without	M16		0.2	0.3		0.5	0.7
	SH 12x80	M8		0.2	0.3		2.3	3.4
	SH 16x85	M10		0.2	0.3		0.5	0.7
2	without	M8		0.2	0.3		1.6	2.4
	without	M10		0.2	0.5		1.5	2.3
	without	M12		0.2	0.3		1.1	1.6
	without	M16		0.2	0.3		1.1	1.6
	SH 12x80	M8		0.2	0.3		3.1	4.6
	SH 16x85	M10		0.2	0.3		1.5	2.2
3	SH 12x80	M8		0.3	0.6		1.1	1.6
	SH 16x85	M10		0.6	1.1		1.6	2.4
	Sh 20x85	M12		0.2	0.4		1.6	2.4
4	SH 12x80	M8		0.6	1.2		0.9	1.3
	SH 16x85	M10		0.7	1.4		1.3	1.9
	Sh 20x85	M12		1.5	2.9		1.3	2.0

Characteristic values for tension and shear loads						
Base mat. no	Density $\rho$ [kg/dm <sup>3</sup> ] Compressive strength $f_b$ [N/mm <sup>2</sup> ]	Sleeve	Anchor size	Effective embedment depth $h_{ef}$	Characteristic resistance	
				[mm]	$N_{Rk}$	$V_{Rk}$
					[kN]	
1	$P \geq 1,8$ $f_b \geq 28$	without	M8	80	3.0	3.0
		without	M10	90	3.0	3.0
		without	M12	100	2.5	2.5
		without	M16	100	4.5	4.5
		SH 12x80	M8	80	3.5	3.5
		SH 16x85	M10	85	3.5	3.5
2	$P \geq 2.0$ $f_b \geq 20$	without	M8	80	6.0	4.0
		without	M10	90	6.0	3.5
		without	M12	100	7.0	5.0
		without	M16	100	6.0	5.0
		SH 12x80	M8	80	5.0	5.0
		SH 16x85	M10	85	5.0	4.0
3	$P \geq 0.9$ $f_b \geq 12$	SH 12x80	M8	80	1.5	1.5
		SH 16x85	M10	85	2.0	2.0
		Sh 20x85	M12	85	3.5	2.5
4	$P \geq 1.4$ $f_b \geq 12$	SH 12x80	M8	80	3.5	2.5
		SH 16x85	M10	85	3.0	2.5
		Sh 20x85	M12	85	3.0	2.5
Partial safety factor $\gamma_M$					2.5	

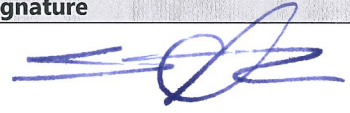
The below performances apply for the following article numbers:

Content	Art Nr	Lot no
300ml	1710050	
400ml	1710052	168_01/2015

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:**

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