Declaration of Performance No. 07144-CPR-140233

Injection Resin JFEA380SF Epoxy Acrylate Resin Styrene Free
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Intended use or uses of the products according to EAD330499-00-0601	
Generic type	Bonded Anchor
Base material	Non-cracked concrete C20/25 to C50/60 acc. EN 206-2:2003 The anchor may be installed in dry, wet and flooded holes
Batch number	Marked on individual tubes
Plating finish	Steel, zinc plated ≥ 5 µm acc. to EN ISO 4042 or Steel, Hot-dip galvanized ≥ 40 µm acc. to EN ISO 1461 and EN ISO 10684
Steel elements	1] Galvanised carbon steel Grade 5.8, 8.8 and 10.9 to EN ISO 891-1 2] Stainless Steel 1.4401, 1.4404 or 1.4571Property class 70 or 80 to EN ISO 3506 3] High corrosion resistan stainless steel to 1.4529, EN 10088-1
Durability	1] Dry internal conditions 2] Internal and external atmospheric exposure including industrial and marine environment, or exposure in permenantly damp internal conditions, if no particularly aggressive conditions exist. 3] Internal and external atmospheric exposure including industrial and marine environment, or exposure in permenantly damp internal conditions, and in other particularly aggressive conditions.
Loading	Static, quasi-static
ETA 14/0233 issued by	ZUS
On the basis of	EAD 330499-00-0601
Certificate of Conformity 0714-CPR-140233 issued by	ZUS
Under system	1
Temperature range(s)	-40°C to +80°C (max. short term temperature +80°C and max long term temperature +50°C
Reaction to fire	Anchorage satisfyes requirements for Class A1

Declared performances according to EAD 330499-00-0601

Essential Characteristics			Performance						
			M08	M10	M12	M16	M20	M24	
Installation parameters									
d_o	Nominal diameter of drill bit	[mm]	10	12	14	18	22	26	
d_f	Fixture clearance hole	[mm]	10	12	14	18	22	26	
d_b	Brush diameter	[mm]	14	14	20	20	29	29	
T_{inst}	Nominal torque moment	[mm]	10	20	40	80	150	200	
$h_{ef,min}$	Minimum effective anchorage depth = 8d								
h_o	Depth of drill hole	[mm]	64	80	96	128	160	192	
h_{min}	Minimum thickness of concrete member	[mm]	100	110	126	158	200	240	
S_{min}	Minimum spacing	[mm]	35	40	50	65	80	96	
C_{min}	Minimum edged distance	[mm]	35	40	50	65	80	96	
$h_{ef,max}$	Maximum effective anchorage depth = 12d								
h_o	Depth of drill hole	[mm]	96	120	144	192	240	288	
h_{min}	Minimum thickness of concrete member	[mm]	126	150	174	222	280	336	
S_{min}	Minimum spacing	[mm]	50	60	70	95	120	145	
C_{min}	Minimum edged distance	[mm]	50	60	70	95	120	145	

Essential Characteristics			Performance						
			M08	M10	M12	M16	M20	M24	
Steel failure- Characteristic resistance									
$N_{Rk,s}$	Characteristic tensile resistance steel **Grade 5.8**	[kN]	18	29	42	79	123	177	
$N_{Rk,s}$	Characteristic tensile resistance steel **Grade 8.8**	[kN]	29	46	67	126	196	282	
$\gamma_{M,s}$	Partial safety factor	[-]	1.5						
$N_{Rk,s}$	Characteristic tensile resistance steel **Grade 10.9**	[kN]	37	58	84	157	245	353	
$\gamma_{M,s}$	Partial safety factor	[-]	1.4						
$N_{Rk,s}$	Characteristic tensile resistance steel **Grade A4-70**	[kN]	26	41	59	110	172	247	
$\gamma_{M,s}$	Partial safety factor	[-]	1.9						
$N_{Rk,s}$	Characteristic tensile resistance steel **Grade A4-80**	[kN]	29	46	67	126	196	282	
$\gamma_{M,s}$	Partial safety factor	[-]	1.6						
$N_{Rk,s}$	Characteristic tensile resistance HRC steel **Grade 1.4529**	[kN]	26	41	59	110	172	247	
$\gamma_{M,s}$	Partial safety factor	[-]	1.5						
Combined pull-out and concrete cone failure									
Characteristic bond resistance in non-cracked concrete C20/25									
τ_{Rk}	Dry,wet and flooded holes concrete	[N/mm^2]	10.0	8.0	9.0	9.5	8.5	8.5	
$\gamma_{M,p}$	Partial safety factor	[-]	1.8						
Splitting failure									
$S_{cr,sp}$	Critical spacing (Splitting)	[mm]	$4.0h_{ef}$			$3.0h_{ef}$			
$C_{cr,sp}$	Critical edge distance (Splitting)	[mm]	$2.0h_{ef}$			$1.5h_{ef}$			
$\gamma_{M,sp}$	Partial safety factor	[-]	1.8						
Displacement under tensile loading									
Nu_{cr}	Service tensile loads in non-cracked concrete	[kN]	6.3	7.9	11.9	23.8	29.8	45.6	
$\delta N0$	Short term displacement under tensile loads	[mm]	0.2	0.2	0.3	0.5	0.7	0.9	
$\delta N\infty$	Long term displacement under tensile loads	[mm]	0.4	0.4	0.4	0.4	0.4	0.4	
Shear steel failure without lever arm									
$V^0_{Rk,s}$	Characteristic shear steel failure **Grade 5.8**	[kN]	9	15	21	39	61	88	
$V^0_{Rk,s}$	Characteristic shear steel failure **Grade 8.8**	[kN]	15	23	34	63	98	141	
$\gamma_{M,sV}$	Partial safety factor	[-]	1.25						
$V^0_{Rk,s}$	Characteristic shear steel failure **Grade 10.9**	[kN]	18	29	42	79	123	177	
$\gamma_{M,sV}$	Partial safety factor	[-]	1.5						
$V^0_{Rk,s}$	Characteristic shear steel failure **Grade A4-70**	[kN]	13	20	30	55	86	124	
$\gamma_{M,sV}$	Partial safety factor	[-]	1.56						
$V^0_{Rk,s}$	Characteristic shear steel failure **Grade A4-80**	[kN]	15	23	34	63	98	141	
$\gamma_{M,sV}$	Partial safety factor	[-]	1.33						
Shear steel failure with lever arm									
$M^0_{Rk,s}$	Characteristic bending moment **Grade 5.8**	[Nm]	19	37	66	166	325	561	
$M^0_{Rk,s}$	Characteristic bending moment **Grade 8.8**	[Nm]	30	60	105	266	519	898	
$\gamma_{M,sV}$	Partial safety factor	[-]	1.25						
$M^0_{Rk,s}$	Characteristic bending moment **Grade 10.9**	[Nm]	37	75	131	333	649	1123	
$\gamma_{M,sV}$	Partial safety factor	[-]	1.5						
$M^0_{Rk,s}$	Characteristic bending moment **Grade A4-70**	[Nm]	26	52	92	233	454	786	
$\gamma_{M,sV}$	Partial safety factor	[-]	1.56						
$M^0_{Rk,s}$	Characteristic bending moment **Grade A4-80**	[Nm]	30	60	105	266	519	898	
$\gamma_{M,sV}$	Partial safety factor	[-]	1.33						
$M^0_{Rk,s}$	Characteristic bending moment **1.4529**	[Nm]	26	52	92	233	454	786	
$\gamma_{M,sV}$	Partial safety factor	[-]	1.25						
Concrete pryout failure									
k_8	Factor in EAD 330499-00-0601 Para 2.2.8, Table 2.6	[-]	2.0						
$\gamma_{M,c}$	Partial safety factor	[-]	1.5						
Shear concrete edge failure									
l_{ef}	Effective anchorage length	[mm]	Effective Embedment Depth (h_{ef})						

Essential Characteristics			Performance						
			M08	M10	M12	M16	M20	M24	
V	Service tensile load in concrete	[kN]	6.3	7.9	11.9	23.8	29.8	45.6	
δ_{N0}	Short term displacement under tensile load	[mm]	0.2	0.2	0.3	0.5	0.7	0.9	
$\delta_{N\infty}$	Long term displacement under tensile load	[mm]	0.4	0.4	0.4	0.4	0.4	0.4	
Displacement under shear load									
V	Service shear load in concrete	[kN]	5.2	8.3	12	22.4	35	50.4	
δ_{V0}	Short term displacement under shear load	[mm]	0.1	0.1	0.2	0.4	0.8	1.5	
$\delta_{V\infty}$	Long term displacement under shear load	[mm]	0.2	0.2	0.3	0.6	1.2	2.3	

Amendment	Date
ETAG changed to EAD	19/12/2017
Platting added Temperature range added Fire restance added	07/09/2018

The performances of the product identified by the above product codes are in conformity with the declared performance

This Declaration of performance is issued under the sole responsibility of JCP Construction Products

Signed for and on behalf of the manufacturers

Name and function	Place and date of issue	Signature
Brian Deluce	Teddington	
Technical Manager	07/09/2018	