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le futur en construction

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European Technical Assessment

ETA-12/0233 of 02/05/2018

English translation prepared by CSTB - Original version in French language

General Part

Nom commercial *Trade name*	**J-Fix Q Spin In Capsules**
Famille de produit *Product family*	**Cheville à scellement de type "capsule" pour fixation dans le béton non fissuré M8, M10, M12, M14, M16, M20, M22, M24 et M30.** ***Bonded capsule anchor for use in non cracked concrete: sizes M8, M10, M12, M14, M16, M20, M22, M24 and M30***
Titulaire *Manufacturer*	**JCP Construction Products** **Stone** **ST15 0SW, Staffordshire** **UNITED KINGDOM**
Usine de fabrication *Manufacturing plant*	**JCP Construction Products**
Cette evaluation contient: *This Assessment contains*	12 pages incluant 9 annexes qui font partie intégrante de cette évaluation 12 *pages including 9 annexes which form an integral part of this assessment*
Base de l'ETE *Basis of ETA*	EAD 330499-00-601, Edition juillet 2017 *EAD 330499-00-601, Edition July 2017*
Cette evaluation remplace: *This Assessment replaces*	ETE-12/0233 délivrée le 24/06/2013 *ETA-12/0233 issued on 24/06/2013*

1 Technical description of the product

The J-FIX Q SPIN de JCP Construction Products adhesive system is a bonded anchor system (capsule type) consisting of glass capsule J-FIX Q SPIN de JCP Construction Products with a threaded rod with hexagon nut and washer of sizes M8, M10, M12, M14, M16, M20, M22, M24 and M30.

The standard threaded rod can be made of zinc plated carbon steel, stainless steel or high corrosion resistant stainless steel.

The glass capsule is placed into a rotary/percussion previously drilled hole and the threaded rod is driven by machine with simultaneous hammering and turning.

The anchor rod is anchored via the bond between anchor rod, chemical mortar and concrete.

The illustration and the description of the product are given in Annex A1.

2 Specification of the intended use

The performances given in Section 3 are only valid if the anchor is used in compliance with the specifications and conditions given in Annexes B.

The provisions made in this European Technical Assessment are based on an assumed working life of the anchor of 50 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3 Performance of the product

3.1 Mechanical resistance and stability (BWR 1)

Essential characteristic	Performance
Characteristic tension resistance and shear resistance for threaded rods acc. TR029	See Annex C1, C2
Characteristic tension resistance and shear resistance for threaded rods acc. CEN/TS 1992-4-5	See Annex C3, C4
Displacements	See Annex C1, C2

3.2 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Anchorages satisfy requirements for Class A1
Resistance to fire	No performance determined (NPD)

3.3 Hygiene, health and the environment (BWR 3)

Regarding dangerous substances contained in this European Technical Assessment, there may be requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

3.4 Safety in use (BWR 4)

For Basic Requirement Safety in Use the same criteria are valid as for Basic Requirement Mechanical Resistance and Stability.

3.5 Protection against noise (BWR 5)

Not relevant.

3.6 Energy economy and heat retention (BWR 6)

Not relevant.

3.7 Sustainable use of natural resources (BWR 7)

For the sustainable use of natural resources no performance was determined for this product.

3.8 General aspects relating to fitness for use

Durability and Serviceability are only ensured if the specifications of intended use according to Annex B1 are kept.

4 Assessment and Verification of Constancy of Performance (AVCP)

According to the Decision 96/582/EC of the European Commission[1], as amended, the system of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) given in the following table apply.

Product	Intended use	Level or class	System
Metal anchors for use in concrete	For fixing and/or supporting to concrete, structural elements (which contributes to the stability of the works) or heavy units	—	1

5 Technical details necessary for the implementation of the AVCP system

Technical details necessary for the implementation of the Assessment and verification of constancy of performance (AVCP) system are laid down in the control plan deposited at Centre Scientifique et Technique du Bâtiment.

The manufacturer shall, on the basis of a contract, involve a notified body approved in the field of anchors for issuing the certificate of conformity CE based on the control plan.

Issued in Marne La Vallée on **02/05/2018** by

Charles Baloche — *The original French version is signed*

Directeur technique

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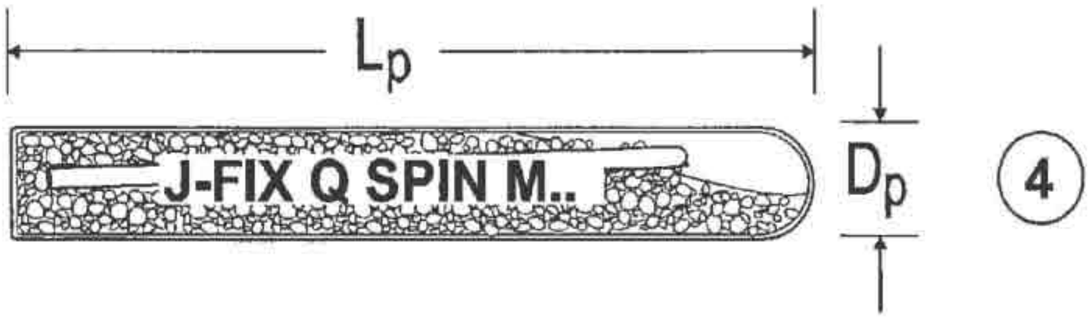
1 Official Journal of the European Communities L 254 of 08.10.1996

GFS chemical capsule anchor J-FIX Q SPIN

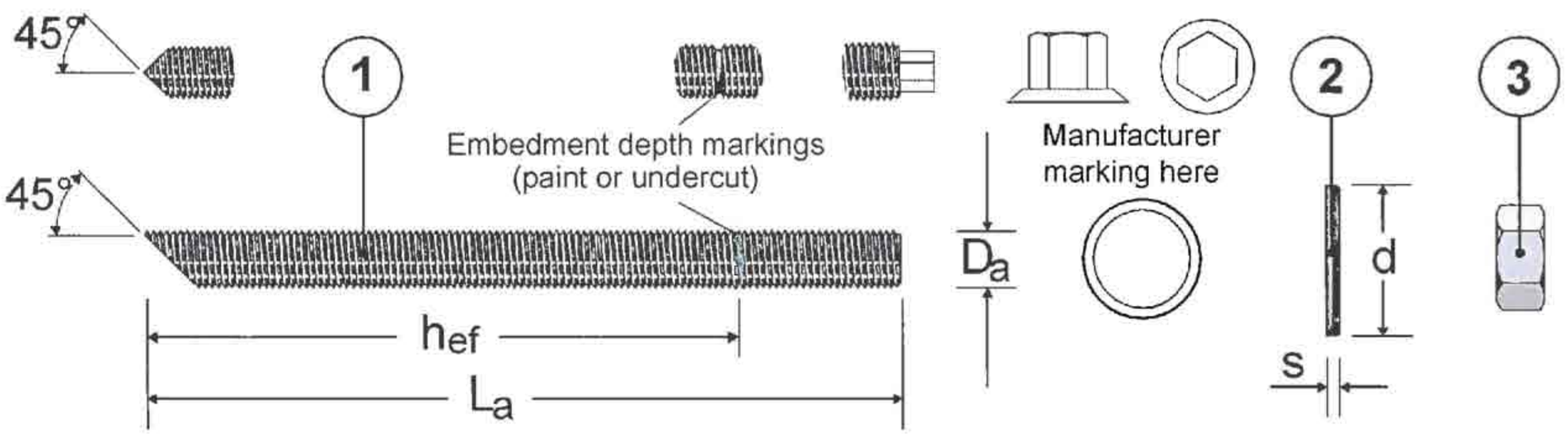
Mortar Capsule J-FIX Q SPIN



Marking

Manufacturer:	JCP Construction Products
Capsule type:	J-FIX Q SPIN
Capsule size:	M..

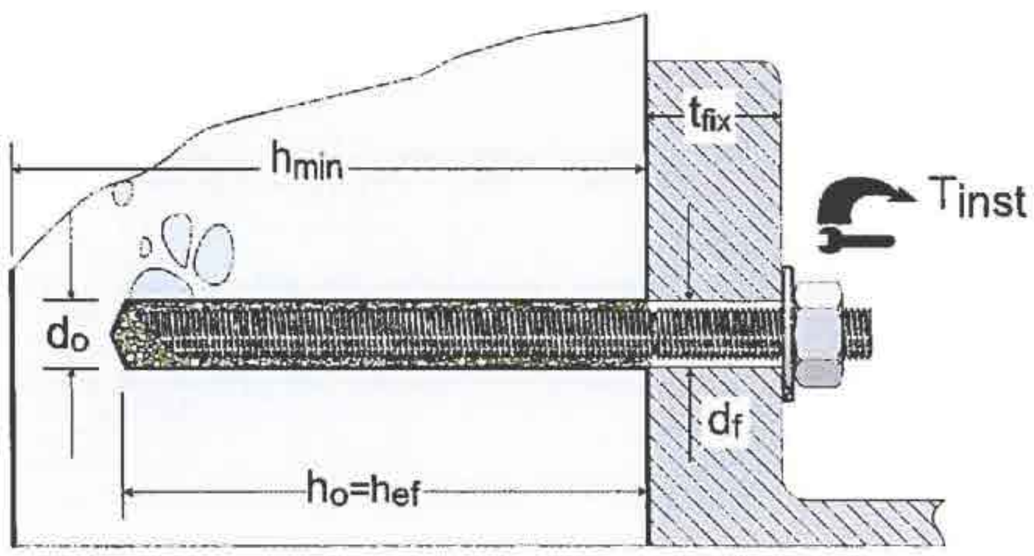
Anchor rod



Marking anchor rod: **e.g. B16A**

Manufacturer	B		
Size	8, 10, 12, 14, 16, 20, 22, 24, 30		
Material			
Galvanised property class 5.8	A	Stainless steel 1.4401, property class 70	C
Galvanised property class 8.8	B	Stainless steel 1.4404, property class 70	K
Hot dipped galvanised property class 5.8	H	Stainless steel 1.4529, property class 70	E
Hot dipped galvanised property class 8.8	I	Stainless steel 1.4565, property class 70	R
		Stainless steel 1.4571, property class 70	D
		Stainless steel 1.4401, property class 80	M
		Stainless steel 1.4404, property class 80	P
		Stainless steel 1.4571, property class 80	O

Installation



J-FIX Q Spin In Capsules

Annex A1

System Description and Installation

Chemical capsule anchor J-FIX Q SPIN

Table A1: Materials

Part	Description	Material			
1	Threaded rod	Carbon steel property class 5.8 or 8.8 EN ISO 898-1		Stainless steel 1.4401, 1.4404 or 1.4571 property class A4-70 or A4-80 EN ISO 3506-1	High corrosion resistant steel 1.4529 or 1.4565 property class 70 EN ISO 3506-1
		Galvanised steel ≥ 5µm acc. to EN ISO 4042	Hot dip galvanised steel EN ISO 10684		
2	Washer	Carbon steel		Stainless steel 1.4401, 1.4404 or 1.4571	High corrosion resistant steel 1.4529 or 1.4565
		Galvanised steel ≥ 5µm acc. to EN ISO 4042	Hot dip galvanised steel EN ISO 10684		
		EN ISO 887 or EN ISO 7089 up to EN ISO 7094			
3	Hexagon nut	Carbon steel property class 4 to 8 EN ISO 20898-2		Stainless steel 1.4401, 1.4404 or 1.4571 property class A4-70 or A4-80 EN ISO 3506-2	High corrosion resistant steel 1.4529 or 1.4565 property class 70 EN ISO 3506-2
		Galvanised steel ≥ 5µm acc. to EN ISO 4042	Hot dip galvanised steel EN ISO 10684		
		EN ISO 4032 or EN ISO 4034			
4	Glass capsule	Glass Quartz Resin Hardener			

Table A2: Dimensions in mm

Part	Description		M8	M10	M12	M12 /1,5t	M14	M16	M16 /1,5t	M20	M20 /1,5t	M22	M24	M24 /1,5t	M30
1	Threaded rod	D_a	M8	M10	M12		M14	M16		M20		M22	M24		M30
		L_a ≥ h_{ef}	95 80	100 90	120 110	175 165	135 120	140 125	205 190	190 170	275 255	210 190	235 210	340 315	320 280
2	Washer	S d	1.6 16	2.1 21	2.5 24		2.5 28	3.0 30		3.0 37		3.0 39	4.0 44		4.0 56
3	Hexagon nut	SW	13	17	19		22	24		30		32	36		46
4	Glass capsule	D_p	9	11	13		15	17		17		22	22		25
		L_p	80	80	95	125	95	95	125	160	250	160	175	245	230

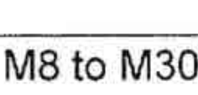
J-FIX Q Spin In Capsules

Materials and Dimensions

Annex A2

Specifications of intended use

Table B1: Overview use categories and performance categories

Use conditions		Mortar capsule J-FIX Q Spin with ...	
		Threaded rods	
			
hammer drilling or compressed air drilling mode. 		✓	
Static and quasi static loading, in non-cracked concrete		M8 to M30 Tables C1, C2, C3, C4, C5, C6	
Use category: dry or wet concrete (flooded holes are excluded)		✓	
Installation temperature (minimum)		mortar +5°C, concrete 0°C	
In-service temperature	Temperature range I:	-40°C to +40°C	(max long term temperature +24°C and max short term temperature +40°C)
	Temperature range II:	-40°C to +80°C	(max long term temperature +50°C and max short term temperature +80°C)

Base materials:

- Reinforced or unreinforced normal weight concrete according to EN 206-1:2000-12.
- Strength classes C20/25 to C50/60 according to EN 206-1:2000-12.

Use conditions (Environmental conditions):

- Structures subject to dry internal conditions
  (zinc coated steel, stainless steel or high corrosion resistant steel).
- Structures subject to permanently damp internal condition :
  - if no particular aggressive conditions exist (stainless steel or high corrosion resistant steel).
  - with particular aggressive conditions (high corrosion resistant steel).
- Structures subject to external atmospheric exposure including industrial and marine environment :
  - if no particular aggressive conditions exist (stainless steel or high corrosion resistant steel).
  - with particular aggressive conditions (high corrosion resistant steel).

  Note: Particular aggressive conditions are e.g. permanent, alternating immersion in seawater or the splash zone of seawater, chloride atmosphere of indoor swimming pools or atmosphere with extreme chemical pollution (e.g. in desulphurization plants or road tunnels where de-icing materials are used).
- Overhead installations are permitted

Design:

- Anchorages are designed under the responsibility of an engineer experienced in anchorages and concrete work.
- Verifiable calculation notes and drawings are prepared taking account of the forces to be transmitted. The position of the anchor is indicated on the design drawings (e. g. position of the anchor relative to reinforcement or to supports, etc.).
- Anchorages under static or quasi-static actions are designed in accordance with (please choose the relevant design method): EOTA Technical Report TR 029, Edition September 2010; CEN/TS 1992-4-5

Table B2: Installation parameters

Anchor size			M8	M10	M12	M12 /1,5t	M14	M16	M16 /1,5t	M20	M20 /1,5t	M22	M24	M24 /1,5t	M30
Nominal drill hole Ø	d_0	[mm]	10	12	14		16	18		22		24	26		32
Cutting diameter	$d_{cut} \leq$	[mm]	10.5	12.5	14.5		16.5	18.5		22.5		24.5	26.5		32.5
Depth of drill hole	h_0	[mm]	80	90	110	165	120	125	190	170	255	190	210	315	280
Ø of clearance hole in the fixture	d_f	[mm]	9	12	14		16	18		22		24	26		33
Steel brush Ø	D	[mm]	11	13	16		18	20		24		26	28		34
Torque moment	T_{inst}	[Nm]	10	20	40		60	80		120		135	180		300

1) for larger clearance hole in the fixture see TR 029 section 1.1 and/or CEN/TS 1992-4-1:2009, section 1.2.3

Steel brush and installation procedure

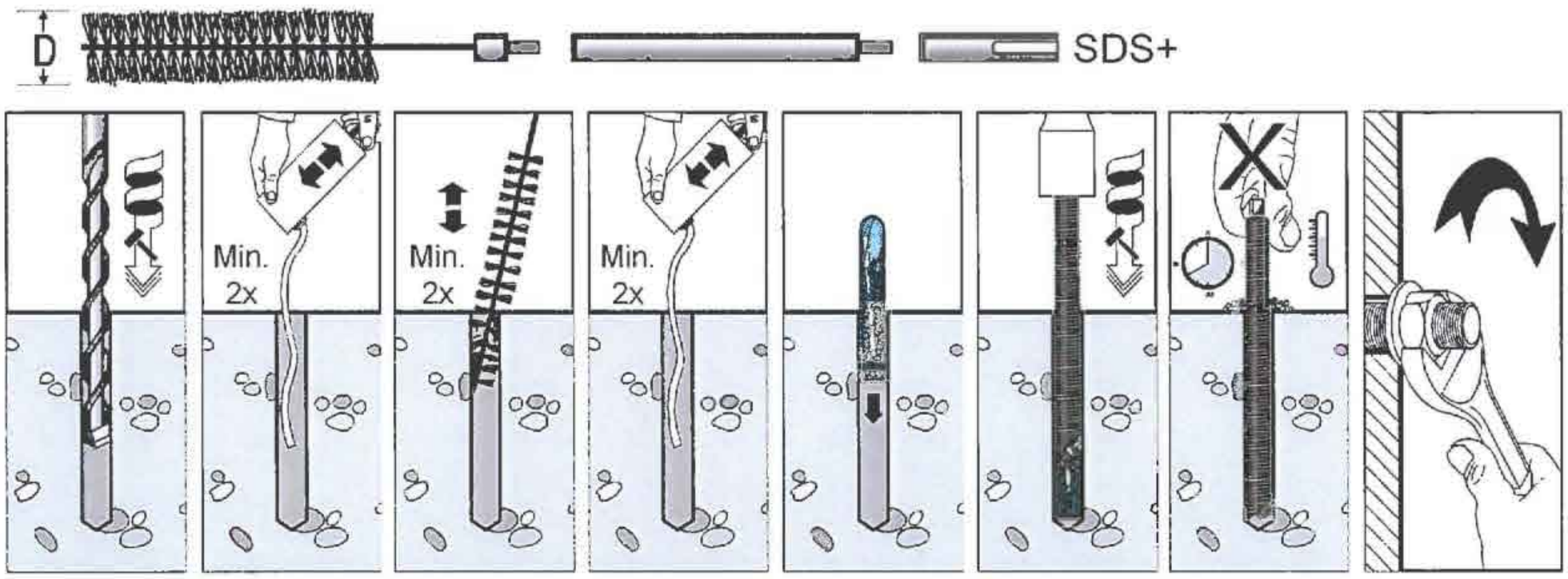


Table B3: Minimum member thickness, edge distance and spacing

Anchor size			M8	M10	M12	M12 /1,5t	M14	M16	M16 /1,5t	M20	M20 /1,5t	M22	M24	M24 /1,5t	M30
Min. member thickness	h_{min}	[mm]	110	120	140	195	150	160	225	220	300	240	260	370	340
Min. edge distance	c_{min}	[mm]	40	45	55	55	60	65	65	85	85	95	105	105	140
Min. spacing	s_{min}	[mm]	40	45	55	55	60	65	65	85	85	95	105	105	140

Table B4: Minimum curing time

Temperature in the concrete member	Minimum curing time in dry concrete	Minimum curing time in wet concrete
≥ + 0 °C	5 hrs.	10 hrs.
≥ + 5 °C	1 hr.	2 hrs.
≥ + 20 °C	20 min.	40 min.
≥ + 30 °C	10 min.	20 min.

Table C1: Characteristic values of resistance to tension loads. Design method TR 029

Anchor size			M8	M10	M12	M12 /1,5t	M14	M16	M16 /1,5t	M20	M20 /1,5t	M22	M24	M24 /1,5t	M30
Steel failure															
Characteristic resistance **property class 5.8**	$N_{Rk,S}$	[kN]	18	29	42		58	78		123		152	177		281
Characteristic resistance **property class 70**	$N_{Rk,S}$	[kN]	26	40	59		81	110		172		212	247		393
Characteristic resistance **property class 8.8 property class 80**	$N_{Rk,S}$	[kN]	29	46	67		92	126		196		242	282		449
Partial safety factor **property class 5.8, 8.8 property class 70 property class 80**	γ_{Ms} 1)	[-]	1.5 1.87 1.60												
Combined Pull-out and Concrete cone failure															
Characteristic bond resistance in non-cracked concrete C20/25															
Temperature range I: 40°C/24°C 2)	$\tau_{Rk,ucr}$	[N/mm²]	12							11					10
Temperature range II: 80°C/50°C 2)	$\tau_{Rk,ucr}$	[N/mm²]	10							9.5					9.0
Partial safety factor	$\gamma_2 = \gamma_{Inst}$	[-]	1.0												1.2
Effective anchorage depth	h_{ef}	[mm]	80	90	110	165	120	125	190	170	255	190	210	315	280
Increasing factors for non-cracked concrete	Ψ_c	C25/30	1.06												
		C30/37	1.14												
		C35/45	1.22												
		C40/50	1.26												
		C45/55	1.30												
		C50/60	1.34												
Splitting failure															
Char. edge distance	$c_{cr,sp}$	[mm]	160	135	140	205	150	160	240	215	320	240	265	395	350
Char. spacing	$s_{cr,sp}$	[mm]	$2 \cdot c_{cr,sp}$												
Partial safety factor	$\gamma_2 = \gamma_{Inst}$	[-]	1.0												1.2

1) In absence of other national regulations / 2) Maximum short and long term temperatures;

Table C2: Displacements under tension loads

Anchor size			M8	M10	M12	M12 /1,5t	M14	M16	M16 /1,5t	M20	M20 /1,5t	M22	M24	M24 /1,5t	M30
Tension load	N	[kN]	9.6	13.5	19.7	29.6	25.1	29.9	45.5	48.3	72.5	59.4	71.6	107.4	94.2
Displacement	δ_{N0}	[mm]	0.17	0.18	0.18	0.18	0.18	0.19	0.19	0.19	0.19	0.20	0.20	0.20	0.21
	$\delta_{N\infty}$	[mm]	0.50												

Table C3: Characteristic values of resistance to shear loads. Design method TR 029

Anchor size			M8	M10	M12	M12 /1,5t	M14	M16	M16 /1,5t	M20	M20 /1,5t	M22	M24	M24 /1,5t	M30
Steel failure without lever arm															
Characteristic resistance **property class 5.8**	$V_{Rk,s}$	[kN]	9	14	21		29	39		61		76	88		140
Characteristic resistance **property class 70**	$V_{Rk,s}$	[kN]	13	20	30		40	55		86		106	124		196
Characteristic resistance **property class 8.8 property class A4-80**	$V_{Rk,s}$	[kN]	15	23	34		46	63		98		121	141		224
Partial safety factor **property class 5.8, 8.8 property class 70 property class A4-80**	γ_{Ms} [1)]	[-]	1.25 1.56 1.33												
Steel failure with lever arm															
Char. bending moment **property class 5.8**	$M^0_{Rk,s}$	[Nm]	19	37	66		105	166		325		448	561		1125
Char. bending moment **property class 70**	$M^0_{Rk,s}$	[Nm]	26	52	92		146	233		454		627	786		1574
Char. bending moment **property class 8.8 property class 80**	$M^0_{Rk,s}$	[Nm]	30	60	105		168	266		519		716	898		1799
Partial safety factor **property class 5.8, 8.8 property class 70 property class 80**	γ_{Ms} [1)]	[-]	1.25 1.56 1.33												
Concrete pryout failure															
Factor in equation (5.7) of TR 029, Section 5.2.3.3	k	[-]	2.0												
Partial safety factor	$\gamma_2 = \gamma_{Inst}$	[-]	1.0												
Concrete edge failure [2)]															
Partial safety factor	$\gamma_2 = \gamma_{Inst}$	[-]	1.0												

[1)] In absence of other national regulations / [2)] Concrete edge failure see chapter 5.2.3.4 of Technical Report TR 029

Table C4: Displacements under shear loads

Anchor size			M8	M10	M12	M12 /1,5t	M14	M16	M16 /1,5t	M20	M20 /1,5t	M22	M24	M24 /1,5t	M30
Shear load	V	[kN]	5.2	8.3	12.0	12.0	16.4	22.4	22.4	35.0	35.0	43.3	50.4	50.4	80.1
Displacement	δ_{V0}	[mm]	2.0	2.1	2.2	2.2	2.3	2.5	2.5	2.6	2.6	2.8	2.8	2.8	3.0
	$\delta_{V\infty}$	[mm]	2.9	3.1	3.3	3.3	3.5	3.7	3.7	4.0	4.0	4.1	4.1	4.1	4.4

Table C5: Characteristic values of resistance to tension loads. Design acc. CEN/TS 1992-4-5

Anchor size			M8	M10	M12	M12 /1,5t	M14	M16	M16 /1,5t	M20	M20 /1,5t	M22	M24	M24 /1,5t	M30
Steel failure															
Characteristic resistance **property class 5.8**	$N_{Rk,S}$	[kN]	18	29	42		58	78		123		152	177		281
Characteristic resistance **property class 70**	$N_{Rk,S}$	[kN]	26	40	59		81	110		172		212	247		393
Characteristic resistance **property class 8.8 property class 80**	$N_{Rk,S}$	[kN]	29	46	67		92	126		196		242	282		449
Partial safety factor **property class 5.8, 8.8 property class 70 property class 80**	γ_{Ms} [1]	[-]	1.5 1.87 1.60												
Combined Pull-out and Concrete cone failure															
Characteristic bond resistance in non-cracked concrete C20/25															
Temperature range I: 40°C/24°C [2]	$\tau_{Rk,ucr}$	[N/mm²]	12							11					10
Temperature range II: 80°C/50°C [2]	$\tau_{Rk,ucr}$	[N/mm²]	10							9.5					9.0
Partial safety factor	$\gamma_2 = \gamma_{Inst}$	[-]	1.0												1.2
Factor acc. CEN/TS 1992-4-5, § 6.2.2.3	k_{ucr}	[-]	10.1												
Effective anchorage depth	h_{ef}	[mm]	80	90	110	165	120	125	190	170	255	190	210	315	280
Increasing factors for non-cracked concrete	Ψ_c	C25/30	1.06												
		C30/37	1.14												
		C35/45	1.22												
		C40/50	1.26												
		C45/55	1.30												
		C50/60	1.34												
Concrete cone failure															
Factor acc. CEN/TS 1992-4-5, § 6.2.3.1	k_{ucr}	[-]	10.1												
Edge distance	$c_{cr,N}$	[-]	$1.5\ h_{ef}$												
Spacing	$s_{cr,N}$	[-]	$3\ h_{ef}$												
Splitting failure															
Char. edge distance	$c_{cr,sp}$	[mm]	160	135	140	205	150	160	240	215	320	240	265	395	350
Char. spacing	$s_{cr,sp}$	[mm]	$2 \cdot c_{cr,sp}$												
Partial safety factor	$\gamma_2 = \gamma_{Inst}$	[-]	1.0												1.2

[1] In absence of other national regulations / [2] Maximum short and long term temperatures;

J-FIX Q Spin In Capsules	Annex C3
Design CEN/TS 1992-4-5: Characteristic values of resistance to tension loads	

Table C6: Characteristic values of resistance to shear loads.
Design acc. CEN/TS 1992-4-5

Anchor size			M8	M10	M12	M12 /1,5t	M14	M16	M16 /1,5t	M20	M20 /1,5t	M22	M24	M24 /1,5t	M30
Steel failure without lever arm															
Characteristic resistance **property class 5.8**	$V_{Rk,s}$	[kN]	9	14	21		29	39		61		76	88		140
Characteristic resistance **property class 70**	$V_{Rk,s}$	[kN]	13	20	30		40	55		86		106	124		196
Characteristic resistance **property class 8.8 property class 80**	$V_{Rk,s}$	[kN]	15	23	34		46	63		98		121	141		224
Partial safety factor **property class 5.8, 8.8 property class 70 property class 80**	γ_{Ms} [1)]	[-]	1.25 1.56 1.33												
Ductility factor acc. CEN/TS 1992-4-5, § 6.3.2.1	k_2	[-]	0.8												
Steel failure with lever arm															
Char. bending moment **property class 5.8**	$M^0_{Rk,s}$	[Nm]	19	37	66		105	166		325		448	561		1125
Char. bending moment **property class 70**	$M^0_{Rk,s}$	[Nm]	26	52	92		146	233		454		627	786		1574
Char. bending moment **property class 8.8 property class 80**	$M^0_{Rk,s}$	[Nm]	30	60	105		168	266		519		716	898		1799
Partial safety factor **property class 5.8, 8.8 property class 70 property class 80**	γ_{Ms} [1)]	[-]	1.25 1.56 1.33												
Concrete pryout failure															
Factor in equation (27) of CEN/TS 1992-4-5, § 6.3.3	k_3	[-]	2.0												
Partial safety factor	$\gamma_2 = \gamma_{Inst}$	[-]	1.0												
Concrete edge failure [2)]															
Concrete Edge failure, see CEN/TS 1992-4-5, § 6.3.4															
Partial safety factor	$\gamma_2 = \gamma_{Inst}$	[-]	1.0												

[1)] In absence of other national regulations / [2)] Concrete edge failure see chapter 5.2.3.4 of Technical Report TR 029

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixtures

Trade name/designation : J-FIX Q M8, J-FIX Q M10, J-FIX Q M12, J-FIX Q M16, J-FIX Q M20, J-FIX Q M24, J-FIX Q M30

Product group : Trade product

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Building and construction work

1.2.2. Uses advised against

No data available

1.3. Details of the supplier of the safety data sheet

JCP Construction Products

Unit 14 Teddington Business Park

Teddington, Middlesex TW11 9BQ, United Kingdom
Tel. +44 20 8943 1800

Fax. +44 20 8943 1140

E-mail address: jcpenquiries@owlett-jaton.com

1.4. Emergency telephone number

Emergency number : +44 20 8943 1800 (8h - 17h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 3	H226
Acute Tox. 4 (Oral)	H302
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Skin Sens. 1	H317
Repr. 1B	H360D
STOT RE 1	H372
Aquatic Chronic 3	H412

Full text of hazard classes and H-statements : see section 16

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS02 GHS07 GHS08

Signal word : Danger

Hazardous ingredients : Styrene; 1,1'-(p-tolylimino)dipropan-2-ol; dicyclohexyl phthalate; Dibenzoyl peroxide

Hazard statements (CLP) : H226 - Flammable liquid and vapour.
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H360D - May damage the unborn child.
H372 - Causes damage to organs through prolonged or repeated exposure.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

Other hazards : PBT/vPvB data : This information is not available.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Substance name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Styrene	(CAS No) 100-42-5 (EC No) 202-851-5 (EC Index) 601-026-00-0 (REACH-no) 01-2119457861-32-XXXX	1 - 12,5	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 2, H361d STOT SE 3, H335 STOT RE 1, H372 Asp. Tox. 1, H304 Aquatic Chronic 3, H412
Dibenzoyl peroxide	(CAS No) 94-36-0 (EC No) 202-327-6 (EC Index) 617-008-00-0 (REACH-no) 01-2119511472-50-xxxx	0,5 - <2.5	Org. Perox. B, H241 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=10)
dicyclohexyl phthalate	(CAS No) 84-61-7 (EC No) 201-545-9 (EC Index) 607-719-00-4	0 - 1,5	Skin Sens. 1, H317 Repr. 1B, H360D
1,1'-(p-tolylimino)dipropan-2-ol	(CAS No) 38668-48-3 (EC No) 254-075-1	0 - 0,75	Acute Tox. 2 (Oral), H300 Eye Dam. 1, H318 Aquatic Chronic 3, H412

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

Additional advice : First aider: Pay attention to self-protection. See also section 8. Never give anything by mouth to an unconscious person or a person with cramps. Show this safety data sheet to the doctor in attendance. Treat symptomatically.

Inhalation : Provide fresh air. Put victim at rest, cover with a blanket and keep warm. In case of doubt or persistent symptoms, consult always a physician.

Skin contact : Remove contaminated, saturated clothing immediately. After contact with skin, wash immediately with plenty of water . Call a physician if irritation develops or persists.

Eyes contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In case of doubt or persistent symptoms, consult always a physician.

On ingestion : : Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation : No adverse effects are expected. May be irritating.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Eyes contact : Causes serious eye irritation.

Ingestion : Harmful if swallowed.

Chronic symptoms : Causes damage to organs through prolonged or repeated exposure. May damage the unborn child.

4.3. Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray, Alcohol resistant foam, Carbon dioxide, Dry extinguishing powder.

Unsuitable extinguishing media : Strong water jet.

5.2. Special hazards arising from the substance or mixture

Specific hazards : Flammable liquid and vapour. Hazardous decomposition products COx. Do not allow run-off from fire-fighting to enter drains or water courses.

5.3. Advice for firefighters

Firefighting instructions : Special protective equipment for firefighters. Use water spray or fog for cooling exposed containers. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not allow run-off from fire-fighting to enter drains or water courses.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

For non-emergency personnel : Evacuate personnel to a safe area. Use personal protective equipment as required. Reference to other sections: 8. Provide adequate ventilation. Avoid contact with skin, eyes and clothing. Do not breathe vapours/dust. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ensure equipment is adequately earthed. Take precautionary measures against static discharges.

6.1.2. For emergency responders

For emergency responders : Ensure procedures and training for emergency decontamination and disposal are in place. Concerning personal protective equipment to use, see section 8.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Stop leak if safe to do so. Take up mechanically and collect in suitable container for disposal. Collect in closed and suitable containers for disposal. Dam up. Dispose of contaminated materials in accordance with current regulations.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Disposal: see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Use only in well ventilated areas. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8 . Avoid contact with skin, eyes and clothing. Do not breathe vapour/aerosol. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Handle and open container with care. After use replace the closing cap immediately. Ensure proper process control to avoid excess waste discharge (temperature, concentration, pH, time). Do not allow to enter into surface water or drains. Take any precaution to avoid mixing with combustibles/... See also section 10 .

Hygiene measures : Keep good industrial hygiene. Wash hands and face before breaks and immediately after handling of the product. Take off contaminated clothing.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep container tightly closed in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from food, drink and animal feedingstuffs. Keep at temperatures below 25 °C. Keep away from heat. Protect from sunlight. Do not store near or with any of the incompatible materials listed in section 10.

7.3. Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Styrene (100-42-5)		
Austria	MAK (mg/m³)	85 mg/m³
Austria	MAK (ppm)	20 ppm
Austria	MAK Short time value (mg/m³)	340 mg/m³
Austria	MAK Short time value (ppm)	80 ppm
Belgium	Limit value (mg/m³)	108 mg/m³
Belgium	Limit value (ppm)	25 ppm
Belgium	Short time value (mg/m³)	346 mg/m³
Belgium	Short time value	80 ppm
Bulgaria	OEL TWA (mg/m³)	85 mg/m³
Bulgaria	OEL STEL (mg/m³)	215 mg/m³
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	430 mg/m³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	100 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m³)	1080 mg/m³
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	250 ppm
Czech Republic	Expoziční limity (PEL) (mg/m³)	100 mg/m³
Denmark	Grænseværdie (ceiling) (ppm)	25 ppm
Denmark	Grænseværdie (ceiling) (mg/m³)	105 mg/m³
Estonia	OEL TWA (mg/m³)	90 mg/m³
Estonia	OEL TWA (ppm)	20 ppm
Estonia	OEL STEL (mg/m³)	200 mg/m³
Estonia	OEL STEL (ppm)	50 ppm
Finland	HTP-arvo (8h) (mg/m³)	86 mg/m³
Finland	HTP-arvo (8h) (ppm)	20 ppm

Styrene (100-42-5)		
Finland	HTP-arvo (15 min)	430 mg/m³
Finland	HTP-arvo (15 min) (ppm)	100 ppm
France	VME (mg/m³)	215 mg/m³
France	VME (ppm)	50 ppm
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	86 mg/m³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 900 Occupational exposure limit value (ppm)	20 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 903 (BGW)	600 mg/g Parameter: Mandelic acid plus Phenylglyoxylic acid - Medium: urine - Sampling time: end of shift (measured as mg/g Creatinine) 600 mg/g Parameter: Mandelic acid plus Phenylglyoxylic acid - Medium: urine - Sampling time: end of several shifts (measured as mg/g Creatinine)
Greece	OEL TWA (mg/m³)	425 mg/m³
Greece	OEL TWA (ppm)	100 ppm
Greece	OEL STEL (mg/m³)	1050 mg/m³
Greece	OEL STEL (ppm)	250 ppm
Hungary	AK-érték	50 mg/m³
Hungary	CK-érték	50 mg/m³
Ireland	OEL (8 hours ref) (mg/m³)	85 mg/m³
Ireland	OEL (8 hours ref) (ppm)	20 ppm
Ireland	OEL (15 min ref) (mg/m3)	170 mg/m³
Ireland	OEL (15 min ref) (ppm)	40 ppm
Latvia	OEL TWA (mg/m³)	10 mg/m³
Lithuania	IPRV (mg/m³)	90 mg/m³
Lithuania	IPRV (ppm)	20 ppm 10 ppm (for planning of new facilities or replacing the old ones)
Lithuania	TPRV (mg/m³)	200 mg/m³
Lithuania	TPRV (ppm)	50 ppm
Poland	NDS (mg/m³)	50 mg/m³
Poland	NDSCh (mg/m³)	100 mg/m³
Portugal	OEL TWA (ppm)	20 ppm
Portugal	OEL STEL (ppm)	40 ppm
Romania	OEL TWA (mg/m³)	50 mg/m³
Romania	OEL TWA (ppm)	12 ppm
Romania	OEL STEL (mg/m³)	150 mg/m³
Romania	OEL STEL (ppm)	35 ppm
Slovakia	NPHV (priemerná) (mg/m³)	86 mg/m³
Slovakia	NPHV (priemerná) (ppm)	20 ppm
Slovakia	NPHV (Hraničná) (mg/m³)	200 mg/m³
Slovenia	OEL TWA (mg/m³)	86 mg/m³

Styrene (100-42-5)		
Slovenia	OEL TWA (ppm)	20 ppm
Slovenia	OEL STEL (mg/m³)	344 mg/m³
Slovenia	OEL STEL (ppm)	80 ppm
Spain	VLA-ED (mg/m³)	86 mg/m³ (endocrine disruptor)
Spain	VLA-ED (ppm)	20 ppm (endocrine disruptor)
Spain	VLA-EC (mg/m³)	172 mg/m³
Spain	VLA-EC (ppm)	40 ppm
Sweden	nivågränsvärde (NVG) (mg/m³)	43 mg/m³
Sweden	nivågränsvärde (NVG) (ppm)	10 ppm
Sweden	kortidsvärde (KTV) (mg/m³)	86 mg/m³
Sweden	kortidsvärde (KTV) (ppm)	20 ppm
United Kingdom	WEL TWA (mg/m³)	430 mg/m³
United Kingdom	WEL TWA (ppm)	100 ppm
United Kingdom	WEL STEL (mg/m³)	1080 mg/m³
United Kingdom	WEL STEL (ppm)	250 ppm
Norway	Grenseverdier (AN) (mg/m³)	105 mg/m³
Norway	Grenseverdier (AN) (ppm)	25 ppm
Norway	Grenseverdier (Korttidsverdi) (mg/m3)	131,25 mg/m³ (value calculated)
Norway	Grenseverdier (Korttidsverdi) (ppm)	37,5 ppm (value calculated)
Switzerland	VME (mg/m³)	85 mg/m³
Switzerland	VME (ppm)	20 ppm
Switzerland	VLE (mg/m³)	170 mg/m³
Switzerland	VLE (ppm)	40 ppm
Australia	TWA (mg/m³)	213 mg/m³
Australia	TWA (ppm)	50 ppm
Australia	STEL (mg/m³)	426 mg/m³
Australia	STEL (ppm)	100 ppm
Canada (Quebec)	VECD (mg/m³)	426 mg/m³
Canada (Quebec)	VECD (ppm)	100 ppm
Canada (Quebec)	VEMP (mg/m³)	213 mg/m³
Canada (Quebec)	VEMP (ppm)	50 ppm
USA - ACGIH	ACGIH TWA (ppm)	20 ppm
USA - ACGIH	ACGIH STEL (ppm)	40 ppm
USA - IDLH	US IDLH (ppm)	700 ppm
USA - NIOSH	NIOSH REL (TWA) (mg/m³)	215 mg/m³
USA - NIOSH	NIOSH REL (TWA) (ppm)	50 ppm
USA - NIOSH	NIOSH REL (STEL) (mg/m³)	425 mg/m³
USA - NIOSH	NIOSH REL (STEL) (ppm)	100 ppm
USA - OSHA	OSHA PEL (TWA) (ppm)	100 ppm
USA - OSHA	OSHA PEL (Ceiling) (ppm)	200 ppm

dicyclohexyl phthalate (84-61-7)		
Austria	MAK (mg/m³)	5 mg/m³
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	5 mg/m³
Denmark	Grænseværdie (langvarig) (mg/m³)	3 mg/m³

dicyclohexyl phthalate (84-61-7)		
Ireland	OEL (8 hours ref) (mg/m³)	5 mg/m³
Ireland	OEL (15 min ref) (mg/m3)	15 mg/m³ (calculated)
Slovenia	OEL TWA (mg/m³)	5 mg/m³
United Kingdom	WEL TWA (mg/m³)	5 mg/m³
United Kingdom	WEL STEL (mg/m³)	15 mg/m³ (calculated)

Dibenzoyl peroxide (94-36-0)		
Austria	MAK (mg/m³)	5 mg/m³ (inhalable fraction)
Austria	MAK Short time value (mg/m³)	10 mg/m³ (inhalable fraction)
Belgium	Limit value (mg/m³)	5 mg/m³
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	5 mg/m³
Czech Republic	Expoziční limity (PEL) (mg/m³)	5 mg/m³
Denmark	Grænseværdie (langvarig) (mg/m³)	5 mg/m³
Estonia	OEL TWA (mg/m³)	5 mg/m³
Finland	HTP-arvo (8h) (mg/m³)	5 mg/m³
Finland	HTP-arvo (15 min)	10 mg/m³
France	VME (mg/m³)	5 mg/m³
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	5 mg/m³ (inhalable fraction)
Greece	OEL TWA (mg/m³)	5 mg/m³
Hungary	AK-érték	5 mg/m³
Hungary	CK-érték	5 mg/m³
Ireland	OEL (8 hours ref) (mg/m³)	5 mg/m³
Ireland	OEL (15 min ref) (mg/m3)	15 mg/m³ (calculated)
Poland	NDS (mg/m³)	5 mg/m³
Poland	NDSCh (mg/m³)	10 mg/m³
Portugal	OEL TWA (mg/m³)	5 mg/m³
Slovakia	NPHV (priemerná) (mg/m³)	5 mg/m³
Slovakia	NPHV (Hraničná) (mg/m³)	5 mg/m³
Slovenia	OEL TWA (mg/m³)	5 mg/m³ (inhalable fraction)
Slovenia	OEL STEL (mg/m³)	5 mg/m³ (inhalable fraction)
Spain	VLA-ED (mg/m³)	5 mg/m³
United Kingdom	WEL TWA (mg/m³)	5 mg/m³
United Kingdom	WEL STEL (mg/m³)	15 mg/m³ (calculated)
Norway	Grenseverdier (AN) (mg/m³)	5 mg/m³
Norway	Grenseverdier (Korttidsverdi) (mg/m3)	10 mg/m³ (value calculated)
Switzerland	VME (mg/m³)	5 mg/m³ (inhalable dust)
Switzerland	VLE (mg/m³)	5 mg/m³ (inhalable dust)
Australia	TWA (mg/m³)	5 mg/m³
Canada (Quebec)	VEMP (mg/m³)	5 mg/m³
USA - ACGIH	ACGIH TWA (mg/m³)	5 mg/m³
USA - IDLH	US IDLH (mg/m³)	1500 mg/m³
USA - NIOSH	NIOSH REL (TWA) (mg/m³)	5 mg/m³
USA - OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³

Additional information : Concentration measurement in air. Personal monitoring

8.2. Exposure controls

Engineering measure(s) : Use only in area provided with appropriate exhaust ventilation. Take precautionary measures against static discharge. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Organisational measures to prevent /limit releases, dispersion and exposure. See also section 7.

Personal protective equipment : The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hand protection : Chemical resistant gloves (according to European standard NF EN 374 or equivalent). Impervious gloves. The selection of specific gloves for a specific application and time of use in a working area, should also take into account other factors on the working space, such as (but not limited to): other chemicals that are possibly used, physical requirements (protection against cutting/drilling, skill, thermal protection), and the instructions/specification of the supplier of gloves. Breakthrough time : >8 hours. VITON gloves. Thickness of the glove material: 0,7 mm. Breakthrough time : <1 hours. Chloroprene. Nitrile rubber. Thickness 0,11 mm

Eye protection : Chemical goggles or safety glasses (EN 166)

Body protection : Wear suitable protective clothing

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Full face mask (EN 136). Half-face mask (DIN EN 140). Filter type: A (EN 141).

Thermal hazard protection : Not required for normal conditions of use.

Environmental exposure controls : Do not allow to enter into surface water or drains. Comply with applicable Community environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: liquid
Appearance	: capsules.
Colour	: Colourless.
Odour	: characteristic.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting / freezing point	: No data available
Freezing point	: No data available
Initial boiling point and boiling range	: No data available
Flash point	: 33 °C Resin
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Vapour density	: No data available
Relative density	: No data available
Solubility	: No data available. Water: Insoluble
Partition coefficient n-octanol/water	: No data available
Kinematic viscosity	: No data available

Dynamic viscosity : 390 - 490 mPa.s

Explosive properties : Not applicable. The study does not need to be conducted because there are no chemical groups associated with explosive properties present in the molecule.

Oxidising properties : Not applicable. The classification procedure needs not to be applied because there are no chemical groups present in the molecule which are associated with oxidising properties.

Explosive limits : No data available

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour. Reference to other sections: 10.5.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

heat : Polymerisation can occur.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. See also section 7. Handling and storage.

10.5. Incompatible materials

Strong oxidizing agents. Strong bases. Strong acids. See also section 7. Handling and storage.

10.6. Hazardous decomposition products

Burning produces noxious and toxic fumes. (COx).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

ATE CLP (oral)	724,6376811594 mg/kg bodyweight

Styrene (100-42-5)	
LD50/oral/rat	1000 mg/kg
LC50/inhalation/4h/rat	11,8 mg/l

dicyclohexyl phthalate (84-61-7)	
LD50/oral/rat	30 ml/kg

Dibenzoyl peroxide (94-36-0)	
LD50/oral/rat	7710 mg/kg

Skin corrosion/irritation : Causes skin irritation.
pH: No data available

Serious eye damage/irritation : Causes serious eye irritation.
pH: No data available

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met.)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met.)

Reproductive toxicity : May damage the unborn child.

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met.)

STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met.)

Other information : Symptoms related to the physical, chemical and toxicological characteristics.
Reference to other sections: 4.2.

SECTION 12: Ecological information

12.1.Toxicity

Environmental properties : Harmful to aquatic life with long lasting effects .

Styrene (100-42-5)	
LC50 fish 1	3,24 - 4,99 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	3,3 - 7,4 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 other aquatic organisms 1	1,4 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata)
LC50 fish 2	19,03 - 33,53 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
LC50 other aquatic organisms 2	500 mg/l Bacteria
EC50 other aquatic organisms 2	0,72 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata)
NOEC (acute)	44 mg/kg (Exposure time: 14 Days - Species: Eisenia foetida [soil dry weight])
NOEC (additional information)	NOEC, Daphnia : 1,01 mg/l (21d)

12.2. Persistence and degradability

J-FIX Q M8, J-FIX Q M10, J-FIX Q M12, J-FIX Q M16, J-FIX Q M20, J-FIX Q M24, J-FIX Q M30	
Persistence and degradability	No data available.

Styrene (100-42-5)	
Biodegradation	Readily biodegradable

12.3. Bioaccumulative potential

J-FIX Q M8, J-FIX Q M10, J-FIX Q M12, J-FIX Q M16, J-FIX Q M20, J-FIX Q M24, J-FIX Q M30	
Partition coefficient n-octanol/water	No data available
Bioaccumulative potential	No data available.

Styrene (100-42-5)	
BCF fish 1	13,5
Partition coefficient n-octanol/water	2,95
Bioaccumulative potential	Does not bioaccumulate.

12.4. Mobility in soil

J-FIX Q M8, J-FIX Q M10, J-FIX Q M12, J-FIX Q M16, J-FIX Q M20, J-FIX Q M24, J-FIX Q M30	
Mobility in soil	No data available
Ecology - soil	No data available.

Styrene (100-42-5)	
Log Koc	352 @ 20°C

12.5. Results of PBT and vPvB assessment

J-FIX Q M8, J-FIX Q M10, J-FIX Q M12, J-FIX Q M16, J-FIX Q M20, J-FIX Q M24, J-FIX Q M30	
Results of PBT assessment	No data available

12.6. Other adverse effects

Additional information : No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Handle with care. Safe handling: see section 7. Handling and storage. Do not allow to enter into surface water or drains. Dispose of contaminated materials in accordance with current regulations. Refer to manufacturer/supplier for information on recovery/recycling. Collect and dispose of waste product at an authorised disposal facility.

Additional information : In accordance with local and national regulations.

Further ecological information : Should not be released into the environment.

European waste catalogue (2001/573/EC, 75/442/EEC, 91/689/EEC) : Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
The following Waste Codes are only suggestions:
150110* - packaging containing residues of or contaminated by dangerous substances

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
1866	1866	1866	Not applicable	Not applicable
14.2. UN proper shipping name				
RESIN SOLUTION	RESIN SOLUTION	Resin solution	RESIN SOLUTION	RESIN SOLUTION
14.3. Transport hazard class(es)				
3	3	3	3	3
Not applicable	Not applicable		Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	III	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

14.6. Special precautions for user

Special precautions for user : No data available

- Overland transport

Transport regulations (ADR) : No good of class 3 according to ADR/RID chapter 2.2.3.1.5

- Transport by sea

Transport regulations (IMDG) : If shipped by vessel in quantities LESS than 30L, IMDG 2.3.2.5 exception applies: Not regulated as a hazardous material.
State on shipping documents: "Transport in accordance with 2.3.2.5 of the IMDG code."

- Air transport

PCA Excepted quantities (IATA) : E1

PCA Limited quantities (IATA) : Y344

PCA limited quantity max net quantity (IATA) : 10L

PCA packing instructions (IATA) : 355

PCA max net quantity (IATA) : 60L
CAO packing instructions (IATA) : 366
CAO max net quantity (IATA) : 220L
Special provisions (IATA) : A3
ERG code (IATA) : 3L

- Inland waterway transport

Transport regulations (ADN) : Not applicable (cf. 2.2.3.1.5)

- Rail transport

Transport regulations (RID) : No good of class 3 according to ADR/RID chapter 2.2.3.1.5

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Code: IBC : No data available.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3. Liquid substances or mixtures which are regarded as dangerous or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	Styrene - 1,1'-(p-tolylimino)dipropan-2-ol
3(a) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F	Styrene
3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	Styrene - 1,1'-(p-tolylimino)dipropan-2-ol
3(c) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1	Styrene - 1,1'-(p-tolylimino)dipropan-2-ol
40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.	Styrene

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

France

No ICPE	Installations classées Désignation de la rubrique	Code Régime	Rayon
4331.text	Liquides inflammables de catégorie 2 ou catégorie 3 à l'exclusion de la rubrique 4330. La quantité totale susceptible d'être présente dans les installations y compris dans les cavités souterraines étant :		
4331.1	1. Supérieure ou égale à 1000 t Quantité seuil bas au sens de l'article R. 511-10 : 5 000 t. Quantité seuil haut au sens de l'article R. 511-10 : 50 000 t.	A	2

4331.2	2. Supérieure ou égale à 100 t mais inférieure à 1000 t Quantité seuil bas au sens de l'article R. 511-10 : 5 000 t. Quantité seuil haut au sens de l'article R. 511-10 : 50 000 t.	E	
4331.3	3. Supérieure ou égale à 50 t mais inférieure à 100 t Quantité seuil bas au sens de l'article R. 511-10 : 5 000 t. Quantité seuil haut au sens de l'article R. 511-10 : 50 000 t.	DC	

Germany

VwVwS Annex reference	: Water hazard class (WGK) 2, hazard to waters (Classification according to VwVwS, Annex 4)
Risk classification according to VbF	: A II - Liquids with a flashpoint between 21°C and 55°C
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV	: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen	: None of the components are listed
SZW-lijst van mutagene stoffen	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	: Styrene,dicyclohexyl phthalate are listed

Denmark

Class for fire hazard	: Class II-1
Store unit	: 5 liter
Classification remarks	: <H226;H302;H315;H317;H319;H360D;H372;H412>; Emergency management guidelines for the storage of flammable liquids must be followed
Recommendations Danish Regulation	: Young people below the age of 18 years are not allowed to use the product Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

For the following substances of this mixture a chemical safety assessment has been carried out
Styrene Dibenzoyl peroxide

SECTION 16: Other information

Indication of changes:

Safety datasheet sections which have been updated : 1-2-3-4-8-11-12-14-15-16.

Abbreviations and acronyms:

	ADN = Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route CLP = Classification, Labelling and Packaging Regulation according to 1272/2008/EC IATA = International Air Transport Association IMDG = International Maritime Dangerous Goods Code LEL = Lower Explosive Limit/Lower Explosion Limit UEL = Upper Explosion Limit/Upper Explosive Limit REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals

	EC50 = Median Effective Concentration
	LC50 = Median lethal concentration
	LD50 = Median lethal dose
	Not applicable
	TLV = Threshold limits
	TWA = time weighted average
	STEL = Short term exposure limit
	persistent, bioaccumulating and toxic (PBT).
	vPvB = very persistent and very bioaccumulating
	WGK = Wassergefährdungsklasse (Water Hazard Class under German Federal Water Management Act)

Sources of key data used to compile the datasheet : European Chemicals Bureau. ECHA website. SDS from supplier.

Other information : Assessment/classification CLP. Article No.: 9. Calculation method.

Full text of H- and EUH-statements:

Acute Tox. 2 (Oral)	Acute toxicity Category 2
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity Category 4
Acute Tox. 4 (Oral)	Acute toxicity Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Aquatic Acute 1
Aquatic Chronic 3	Hazardous to the aquatic environment - chronic hazard category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Org. Perox. B	Organic Peroxides, Type B
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Hazard Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, hazard category 1
STOT RE 1	Specific target organ toxicity — Repeated exposure, Category 1
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H226	Flammable liquid and vapour.
H241	Heating may cause a fire or explosion.
H300	Fatal if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H360D	May damage the unborn child.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

The contents and format of this SDS are in accordance with EEC Commission Directive 2015/830/EC, 1272/2008/EC and EEC Commission Regulation 1907/2006/EC (REACH) Annex II.

DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we

do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Spin In Quartz Capsules

INFORMATION

The Quartz Spin In Capsules are suitable for use in the vast majority of base materials. The quartz aggregate enable the anchor to achieve exceptional loads. It can be used for installing threaded studs, rebar or internal threaded sockets for structural applications such as:

- Columns
- Guard rails
- Façades
- Staircases
- Silo installation
- Machines
- Cantilever beams

BASE MATERIAL

- Concrete C20/25 To C50/60
- Non-Cracked Concrete
- Dry/Wet Holes
- Solid Brickwork
- Concrete Block
- Natural Stone

FEATURES

- Expansion Free
- Good resistance to vibrating loads
- High Performance
- Close Spacing And Edge Distance
- Can be used in wet and corro-sive environments

APPROVALS

European Technical Approval
Option 7 Non-Cracked Concrete

ETA12/0233

RELATED PRODUCTS

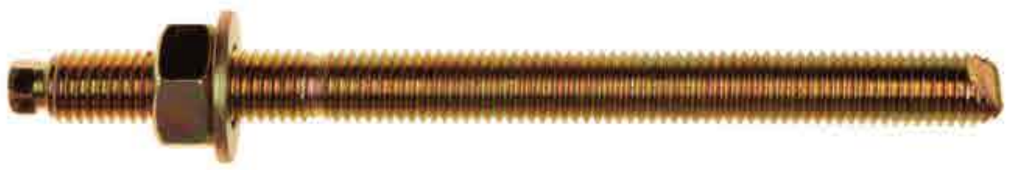
SDS+ Drill Bits

Hole Cleaning Brushes and Pump

LOADING(CURING) TIME

Concrete Member Temperature °C	Minimum Curing Time In Dry Concrete $T_{load,dry}$ (mins)	Minimum Curing Time In Wet Concrete $T_{load,wet}$ (mins)
≥ -5°C	300 (5 hrs.)	600 (10 hrs.)
≥ +5°C	60 (1 hr.)	120 (2 hrs.)
≥ +20°C	20	40
≥ +30°C	10	20

EMBEDDED CHISEL END THREADED ROD



- High Tensile Grade 8.8 Chisel End Studs
- Zinc Plated And Yellow Passivated Min. 5µm
- Setting Tool Included

- Stainless Steel Grade A4/316
- Chisel End Studs
- Setting Tool Included

- Zinc Plated And Clear Passivated Min. 5µm
- Chisel End Studs
- Setting Tool Included

Technical Data Sheet

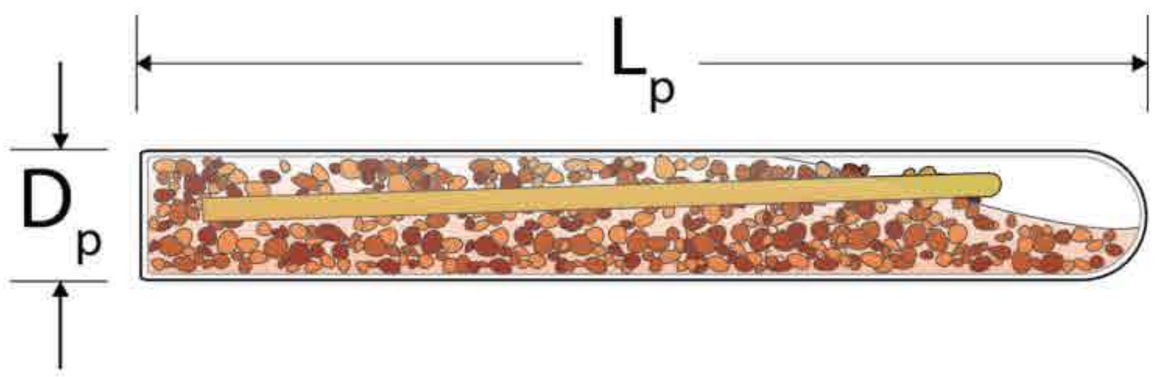
Supplied By
FFT
Fasteners, Fixings & Tools
01234 333949
FAX- 01234 211069
info@fasteners-ft.co.uk
www.fastenersfixingsandtools.co.uk

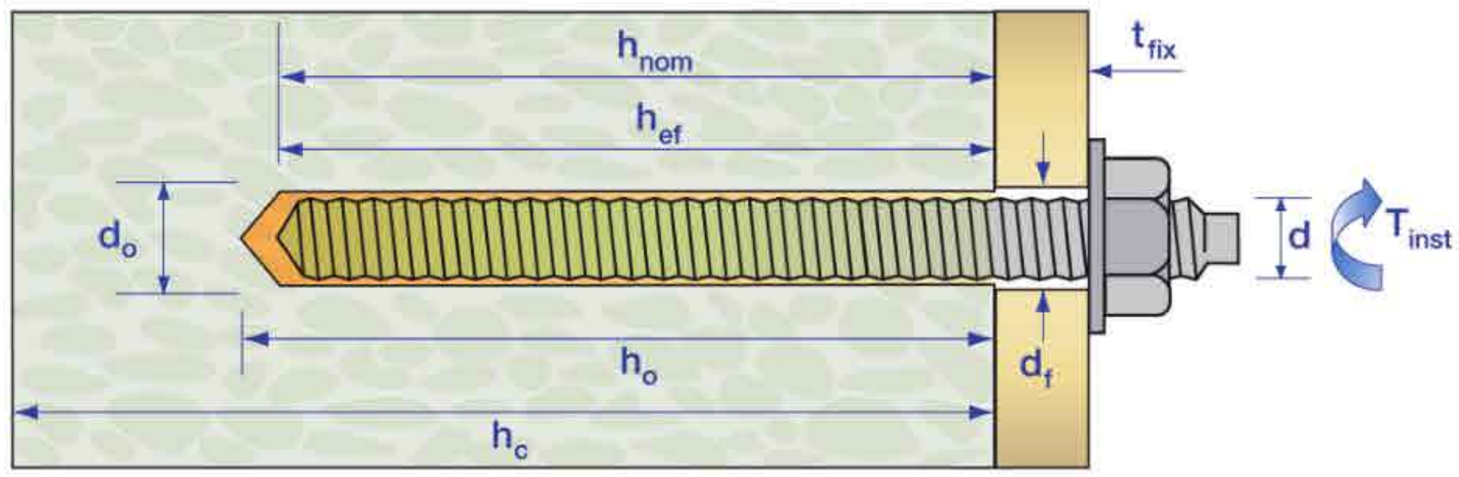
Spin In Quartz Capsules

RANGE AND LOAD DATA

CAPSULES DATA					
Part Number	Thread Diam (d)	Capsules Diameter (D_p)	Drill Hole Diameter (d_0)	Capsules Length (L_p)	Minimum Hole Depth (h_0)*
	mm	mm	mm	mm	mm
JCAPSM08	M8	9	10	80	80
JCAPSM10	M10	11	12	80	90
JCAPSM12	M12	13	14	95	110
JCAPSM16	M16	17	18	95	125
JCAPSM20	M20	17	22	160	170
JCAPSM24	M24	22	26	175	210
JCAPSM30	M30	25	32	230	280

* *For the Spin In Capsules :* $h_0=h_{ef}$





For variations in structure thickness, reduced spacing and edge calculations download the free **A**nchor **C**alculation **P**rogram from **www.jcpfixings.co.uk**

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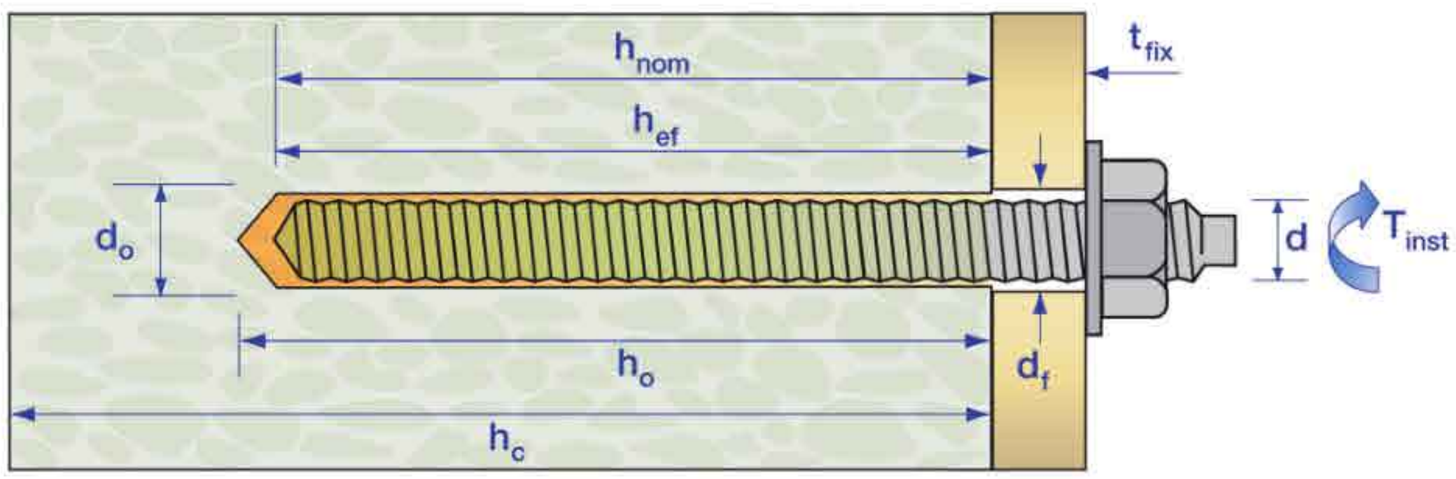
www.jcpfixings.co.uk

Spin In Quartz Capsules

RANGE DATA							
Part Number	Thread Diam (d)	Stud Length (L)	Drill Hole Diam (d_0)	Fixture Clearance Hole (d_f)	Standard Embedment		Tightening Torque (T_{inst})
					Max. Fix. Thickness (t_{fix})	Min. Hole Depth (h_0)*	
	mm	mm	mm	mm	mm	mm	Nm
High Tensile Grade 8.8 Zinc Plated** Yellow Passivated Chisel End Studs							
JSTUD08110HT	M8	110	10	10	18	80	10
JSTUD10130HT	M10	130	12	12	25	90	20
JSTUD12160HT	M12	160	14	14	34	110	40
JSTUD16190HT	M16	190	18	18	45	125	80
JSTUD20260HT	M20	260	22	22	55	170	120
JSTUD24300HT	M24	300	26	26	55	210	180
JSTUD30380HT	M30	380	32	32	55	280	300
Stainless Steel Grade A4/316 Chisel End Studs							
JSTUD08110SSA4	M8	110	10	10	18	80	10
JSTUD10130SSA4	M10	130	12	12	25	90	20
JSTUD12160SSA4	M12	160	14	14	34	110	40
JSTUD16190SSA4	M16	190	18	18	45	125	80
JSTUD20260SSA4	M20	260	22	22	55	170	120
JSTUD24300SSA4	M24	300	26	26	55	210	180
Zinc Plated** Steel Grade 5.8 - Clear Passivated and Chisel End Studs							
JSTUD08110	M8	110	10	10	18	80	10
JSTUD10130	M10	130	12	12	25	90	20
JSTUD12160	M12	160	14	14	34	110	40
JSTUD16190	M16	190	18	18	45	125	80
JSTUD20260	M20	260	22	22	55	170	120
JSTUD24300	M24	300	26	26	55	210	180
JSTUD30380	M30	380	32	32	55	280	300

* *For the Spin In Capsules:* $h_0=h_{ef}$

** *Zinc Plated Minimum 5µm*



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Spin In Quartz Capsules

LOAD DATA - NON-CRACKED CONCRETE

HIGH TENSILE ZINC PLATED STEEL GRADE 8.8

Grade 8.8 Zinc Plated Studs Performance Data (C20/25 non-cracked concrete)												
Thread Diam (d) mm	Minimum Hole Depth (h_0) mm	Minimum Concrete Thickness (h_{min}) mm	Characteristic Resistance kN		Design Resistance kN		Approved Resistance kN		Design Spacing (S) mm		Design Edge Distance (C) mm	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ra})	Shear (V_{Ra})	Tensile	Shear	Tensile	Shear
8	80	110	24.0	15.0	16.0	12.0	11.4	8.5	200	40	110	120
10	90	120	33.9	23.0	22.6	18.4	16.1	13.1	260	50	130	170
12	110	140	49.6	34.0	33.1	27.2	23.6	19.4	310	60	160	230
16	125	165	70.5	63.0	47.0	50.4	33.5	36.0	380	70	190	390
20	170	215	111.9	98.0	74.6	78.4	53.2	56.0	510	100	260	530
24	210	270	153.6	141.0	102.4	112.8	73.1	80.5	630	140	320	670
30	280	350	236.5	224.0	131.4	179.2	93.8	128.0	840	420	420	920

STAINLESS STEEL GRADE A4/316

Grade A4-70 Stainless Steel Studs Performance Data (C20/25 non-cracked concrete)												
Thread Diam (d) mm	Minimum Hole Depth (h_0) mm	Minimum Concrete Thickness (h_{min}) mm	Characteristic Resistance kN		Design Resistance kN		Approved Resistance kN		Design Spacing (S) mm		Design Edge Distance (C) mm	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ra})	Shear (V_{Ra})	Tensile	Shear	Tensile	Shear
8	80	110	25.9	13.0	13.9	8.3	9.9	5.9	140	40	90	80
10	90	120	39.8	20.0	21.3	12.8	15.2	9.1	220	50	120	120
12	110	140	58.9	30.0	31.5	19.2	22.5	13.7	280	60	150	160
16	125	165	70.5	55.0	47.0	35.2	33.5	25.1	380	70	190	260
20	170	215	111.9	86.0	74.6	55.1	53.2	39.3	510	90	260	350
24	210	270	153.6	124.0	102.4	79.4	73.1	56.7	630	110	320	450
30	280	350	236.5	196.0	131.4	125.6	93.8	89.7	840	140	420	600

ZINC PLATED STEEL GRADE 5.8

Grade 5.8 Zinc Plated Studs Performance Data (C20/25 non-cracked concrete)												
Thread Diam (d) mm	Minimum Hole Depth (h_0) mm	Minimum Concrete Thickness (h_{min}) mm	Characteristic Resistance kN		Design Resistance kN		Approved Resistance kN		Design Spacing (S) mm		Design Edge Distance (C) mm	
			Tensile (N_{Rk})	Shear (V_{Rk})	Tensile (N_{Rd})	Shear (V_{Rd})	Tensile (N_{Ra})	Shear (V_{Ra})	Tensile	Shear	Tensile	Shear
8	80	110	22.4	9.0	12.0	7.2	8.5	5.1	80	40	70	70
10	90	120	36.0	14.0	19.3	11.2	13.7	8.0	170	50	110	110
12	110	140	52.3	21.0	28.0	16.8	20.0	12.0	210	60	130	130
16	125	165	70.5	39.0	47.0	31.2	33.5	22.2	380	70	190	230
20	170	215	111.9	61.0	74.6	48.8	53.2	34.8	510	90	260	310
24	210	270	153.6	88.0	102.4	70.4	73.1	50.2	630	110	320	390
30	280	350	236.5	140.0	131.4	112.0	93.8	80.0	840	140	420	520

Technical Data Sheet

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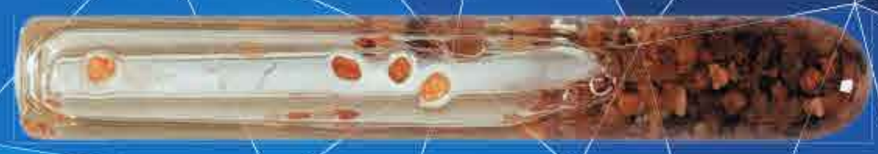
Spin In Quartz Capsules



SUPPLEMENTARY DATA

INFLUENCE OF CONCRETE STRENGTH					
Concrete strength		C20/25	C30/37	C40/50	C50/60
Cylinder	N/mm²	20	30	40	50
Cube	N/mm²	25	37	50	60
Factor	Cracked	1.0	1.14	1.26	1.34

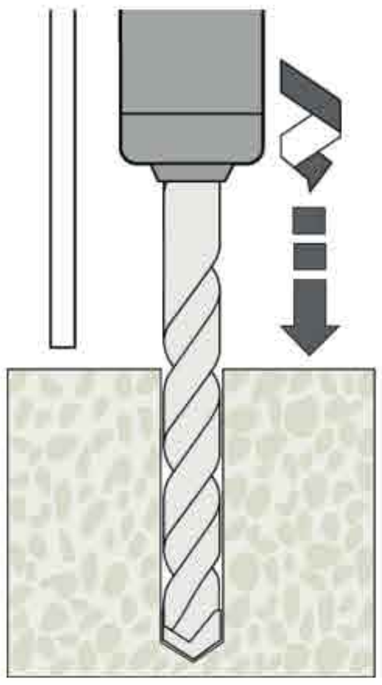
Important Note:

When using concrete factors ensure that loads do not exceed Steel Design Resistance.

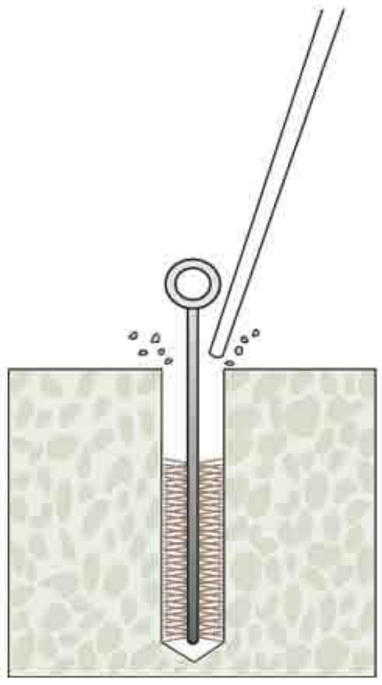
STEEL DESIGN RESISTANCE FOR SINGLE ANCHOR								
Load Type	Steel Grade	Threaded Rod Size						
		M8	M10	M12	M16	M20	M24	M30
Tensile (kN)	High Tensile Grade 8.8	19.3	30.7	44.7	84.0	130.7	188.0	299.3
	Stainless Steel Grade A4-70	13.7	21.6	31.1	57.9	90.5	130.0	206.8
	Grade 5.8	12.0	19.3	28.0	52.7	82.0	118.0	187.3
Shear (kN)	High Tensile Grade 8.8	12.0	18.4	27.2	50.4	78.4	112.8	179.2
	Stainless Steel Grade A4-70	8.3	12.8	19.2	35.3	55.1	79.5	125.6
	Grade 5.8	7.2	12.0	16.8	31.2	48.8	70.4	112.0

For variations in structure thickness, reduced spacing and edge calculations download the free **A**nchor **C**alculation **P**rogram from **www.jcpfixings.co.uk**

INSTALLATION INSTRUCTIONS



-Drill correct diameter hole to corresponding depth



-Clean hole by brushing, blowing to remove drilling debris and dust:

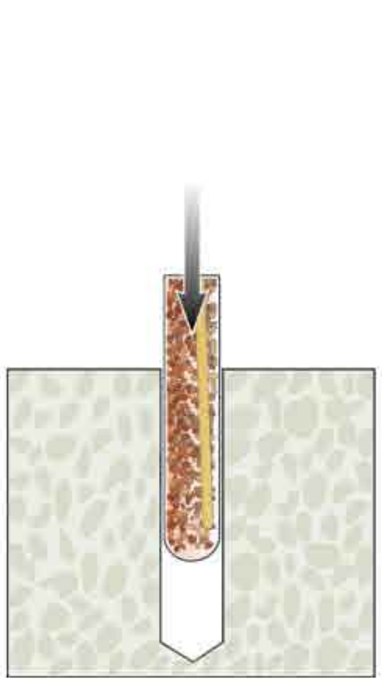
2×Blowing

2×Brushing

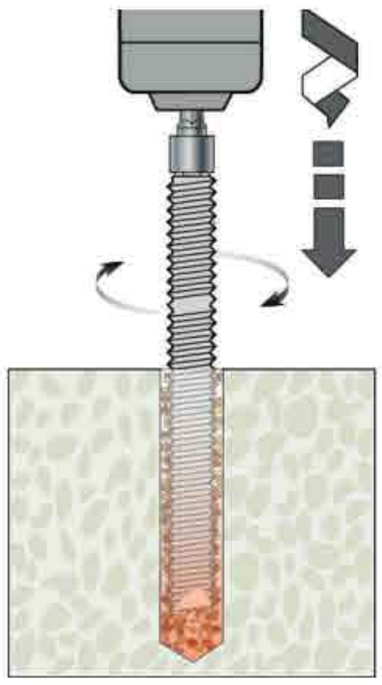
2×Blowing

2×Brushing

2×Blowing

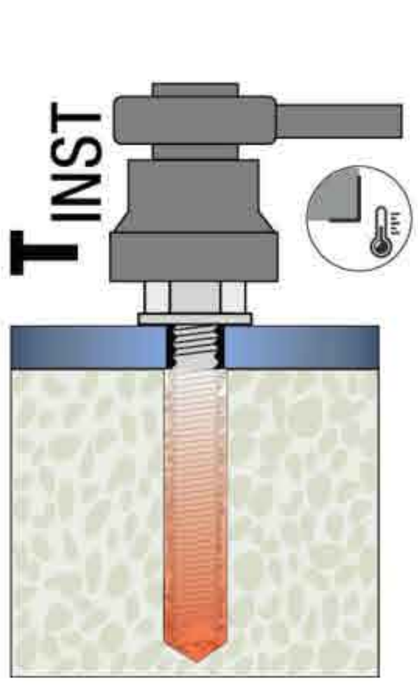


-Insert Spin-In Capsule into drilled hole with air gap in capsule nearest to surface



-Attach setting tool to stud and spin into capsule with drilling machine

-Using rotary hammer action until Depth Mark is reached



-Allow resin to cure

-Attach fixture

-Tighten with torque wrench to recommended torque

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Declaration of Performance No. 0679-CPD-0764

JCP Chemical Capsule Anchor - Quartz
JCP Construction Products,
Unit 14 Teddington Business Park, Station Rd, Teddington, Middlesex TW11 9BQ
Telephone +44 (0)208 943 1800

Intended use or uses of the products according to EAD 330499-00-0601	
Generic type	Bonded Anchor
Base material	Non-cracked concrete C20/25 to C50/60 acc. EN 206-2:2003
Batch Number	Marked on individual boxes
Material	1] Galvanised carbon steel Grade 5.8 and 8.8 to EN ISO 891-1 2]Stainless Steel A4, 1.4401, 1.4404 or 1.4571 Property class 70 or 80 to EN ISO 3506 3[High corrosion resistant stainless steel, 1.4529, 1.4565
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
Use category	Dry or wet concrete (Flooded holes are excluded)
Reaction to fire	Class A1
Temperature range(s)	-40°C to +40°C (max. short term temperature +40°C and Max. long term temperature +24°C)
ETA 12/0233 issued by	CSTB
On the basis of	EAD 330499-00-0601
Certificate of Conformity 0679-CPD-0764 issued by	CSTB
Under system	1

Declared performances according to ETA 12/0233 Issued 02/05/2018									
Essential Characteristics			Performance						
			M08	M10	M12	M16	M20	M24	M30
Installation parameters									
d_o	Nominal diameter of drill bit	[mm]	10	12	14	18	22	26	32
d_f	Fixture clearance hole	[mm]	9	12	14	18	22	26	33
d_b	Brush diameter	[mm]	11	13	16	20	24	28	34
h_{ef}	Effective anchorage depth	[mm]	80	90	110	125	170	210	280
h_{nom}	Minimum installation depth	[mm]	80	90	110	125	170	210	280
h_1	Depth of drill hole to deepest point	[mm]	80	90	110	125	170	210	280
h_{min}	Minimum thickness of concrete member	[mm]	110	120	140	160	220	260	340
T_{inst}	Nominal torque moment	[mm]	10	20	40	80	120	180	300
S_{min}	Minimum spacing	[mm]	40	45	55	65	85	105	140
C_{min}	Minimum edged distance	[mm]	40	45	55	65	85	105	140
Tensile steel failure									
NRk,s	Characteristic tensile resistance steel **Grade 5.8**	[kN]	18	29	42	78	123	177	281
NRk,s	Characteristic tensile resistance steel **Grade 8.8**	[kN]	29	46	67	126	196	282	449
γM,s	Partial safety factor		1.5						
NRk,s	Characteristic tensile resistance steel **Grade A4-70**	[kN]	26	40	59	110	172	247	393
γM,s	Partial safety factor		1.87						
NRk,s	Characteristic tensile resistance steel **Grade A4-80**	[kN]	29	46	67	126	196	282	449
γM,s	Partial safety factor		1.6						
NRk,s	Characteristic tensile resistance HCR steel **Grade 70**	[kN]	26	40	59	110	172	247	393
γM,s	Partial safety factor		1.87						
Pull-out failure, concrete cone failure									
τRk,p,ucr	Characteristic bond strength in uncracked concrete C20/25	[N/mm2]	12	12	12	12	11	11	10
γM,p	Partial safety factor (Includes γ2)	[-]	1.5						1.8

ΨcC25/30	Increasing factor for concrete C25/30	[-]	1.06						
ΨcC30/37	Increasing factor for concrete C30/37	[-]	1.14						
ΨcC35/45	Increasing factor for concrete C35/45	[-]	1.22						
ΨcC40/50	Increasing factor for concrete C40/50	[-]	1.26						
ΨcC45/55	Increasing factor for concrete C45/55	[-]	1.30						
ΨcC50/60	Increasing factor for concrete C50/60	[-]	1.34						
Splitting failure									
$S_{cr,sp}$	Critical spacing (Splitting)	[mm]	320	270	280	320	430	530	700
$C_{cr,sp}$	Critical edge distance (Splitting)	[mm]	160	135	140	160	215	265	350
γM,sp	Partial safety factor (Includes γ2)	[-]	1.5						1.8
Displacement on tensile loading									
Nu_{cr}	Service tensile loads in uncracked concrete	[kN]	9.6	13.5	19.7	29.9	48.3	71.6	94.2
$\delta N0,u_{cr}$	Short term displacement under tensile loads	[mm]	0.17	0.18	0.18	0.19	0.19	0.20	0.21
$\delta N\infty,_{ucr}$	Long term displacement under tensile loads	[mm]	0.50						
Shear steel failure without lever arm									
$V,_{Rk,s}$	Characteristic shear steel failure **Grade 5.8**	[kN]	9	14	21	39	61	88	140
$V,_{Rk,s}$	Characteristic shear steel failure **Grade 8.8**	[kN]	15	23	34	63	98	141	224
γm,sV	Partial safety factor	[-]	1.25						
$V,_{Rk,s}$	Characteristic shear steel failure **Grade A4-70**	[kN]	13	20	30	55	86	124	196
γm,sV	Partial safety factor	[-]	1.56						
$V,_{Rk,s}$	Characteristic shear steel failure **Grade A4-80**	[kN]	15	23	34	63	98	141	224
γm,sV	Partial safety factor	[-]	1.33						
$V,_{Rk,s}$	Characteristic shear steel failure HCR steel **Grade 70**	[kN]	13	20	30	55	86	124	196
γm,sV	Partial safety factor	[-]	1.56						
Shear steel failure with lever arm									
$M^0_{Rk,s}$	Characteristic bending moment **Grade 5.8**	[Nm]	19	37	66	166	325	561	1125
$M^0_{Rk,s}$	Characteristic bending moment **Grade 8.8**	[Nm]	30	60	105	266	519	898	1799
γm,sV	Partial safety factor	[-]	1.25						
$M^0_{Rk,s}$	Characteristic bending moment **Grade A4-70**	[Nm]	26	52	92	233	454	786	1574
γm,sV	Partial safety factor	[-]	1.56						
$M^0_{Rk,s}$	Characteristic bending moment **Grade A4-80**	[Nm]	30	60	105	266	519	898	1799
γm,sV	Partial safety factor	[-]	1.33						
$M^0_{Rk,s}$	Characteristic bending moment HCR steel **Grade 70**	[Nm]	26	52	92	233	454	786	1574
γm,sV	Partial safety factor	[-]	1.56						
Shear concrete edge failure									
l_{ef}	Effective anchorage length	[mm]	80	90	110	125	170	210	280
Displacement on shear load									
V	Service shear load in concrete	[kN]	5.2	8.3	12	22.4	35.0	50.4	80.1
δ_{v0}	Short term displacement under shear load	[mm]	2.0	2.1	2.2	2.5	2.6	2.8	3.0
δV∞	Long term displacement under shear load	[mm]	2.9	3.1	3.3	3.7	4.0	4.1	4.4

The performance data above relates to the following product codes

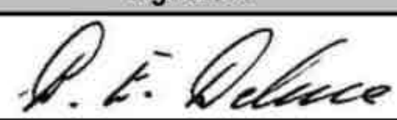
d	Marking	Diam [mm]	Length [mm]	Product Code
M8	JFIX Q SPIN M8	9	80	JCAPSM08
M10	JFIX Q SPIN M10	11	80	JCAPSM10
M12	JFIX Q SPIN M12	13	95	JCAPSM12
M16	JFIX Q SPIN M16	17	95	JCAPSM16
M29	JFIX Q SPIN M20	17	160	JCAPSM20
M24	JFIX Q SPIN M24	22	175	JCAPSM24
M30	JFIX Q SPIN M30	25	230	JCAPSM30

Amendments	Date
ETAG changed to EAD	20/12/2017
Temperature Range changed	23/08/2018
Bond Strength changed	

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	23/08/2018	

CSTB
le futur en construction

NOTIFIED BODY n°0679

Authorized and notified according to Article 10 of the Council Directive of 21 December 1988 on the approximation of laws, regulations and administrative provisions of Member States relating to construction products (89/106/EEC)

EC Certificate of conformity 0679-CPD-0764

(English translation, the original version is in French)

In compliance with the Directive 89/106/EEC of the Council of European Communities of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Members States relating to the construction products (Construction Products Directive – CPD), amended by the Directive 93/68/EEC of the Council of European Communities of 22 July 1993, it has been stated that the construction product:

J-FIX Q SPIN Capsule Anchor System

Bonded capsule anchor for use in non cracked concrete : sizes M8, M10, M12, M14, M16, M20, M22, M24 and M30

Use category:

ETAG 001 - partie 1 et 5

Particular conditions applicable to the use of the product:

See the detail of the conditions in the chapter 1.2 of ETA

placed on the European economic area market by:

JCP Construction Products
Unit 07, Princess Court
Horace Road
Kingston Upon Thames
Surrey KT1 2SL
ROYAUME UNI

and produced in the factory:

Plant JCP 1

is submitted by the manufacturer to a factory production control and to the further testing of samples taken at the factory in accordance with a prescribed test plan and that the approved body – CSTB – has performed the initial type-testing for the relevant characteristics of the product, the initial inspection of the factory and of the factory production control and performs the continuous surveillance, assessment and approval of the factory production control (system 1).

This certificate attests that all provisions concerning the attestation of conformity and the product characteristics described in the technical specification in reference:

"European Technical Approval ETA-12/0233 valid from 25 April 2012 to 04 January 2015"

are applied and that the product fulfils all the prescribed requirements.

This certificate can only be used in conjunction with the declaration of conformity of the product written by the manufacturer or his authorised representative established in the European economic area and with the technical specification in reference.

This certificate is first issued on 26 April 2012 *and, except for withdrawal or suspension, remains valid as long as the conditions laid down in the corresponding technical specification in reference or the manufacturing conditions in the factory or the factory production control itself are not modified significantly and latest on* 04 January 2015.

The list of the conformity certificates issued by CSTB is kept up-to-date by the CSTB

Technical Department

Yannick LEMOIGNE

Issued in Champs sur Marne, on 26 April 2012