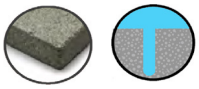
TRUTEK TCM C PRO INJECTION RESIN
Hybrid Vinylester

Usage:

- Installation of threaded studs
- Approved for non crack concrete
- Can be used in dry wet and flooded holes
- Suitable for use in brickwork
- Class A1 reaction to fire

For use with:

- Non Cracked Concrete
- Flooded Holes



Advantages:

- Styrene free for interior use and confined spaces
- Available in 300ml & 420ml cartridge
- Suitable for concrete from c20/25 to c50/60
- Range of embedment depths

Resin setting times					
Substrate temperature	°C	0 - 10	10 - 20	20 - 30	30 - 40
Gel time	min.	20	9	5	3
Cure time in dry concrete	hour.	90	60	30	20

The temperature of the resin container must be ≥20°C

Concrete Ranges:	C20/25 to C0/60 according to EN 206:2013+A1:2016
Certification:	European Technical Assessment ETA 19/0141 Issued 28/02/2019

Installation Data

Threaded Stud Diameter			M8	M10	M12	M16	M20	M24
Nominal drill hole diameter	d_o	[mm]	10	12	14	18	22/24	28
Diameter of steel brush	d_b	[mm]	10	12	14	18	22/24	28
Minimum Effective Anchorage Depth	$h_{,ef,min}$	[mm]	60	60	70	80	90	96
Maximum Effective Anchorage Depth	$h_{ef,max}$	[mm]	96	120	144	192	240	288
Standard Effective Anchorage Depth	$h_{ef,std}$	[mm]	80	90	110	125	170	210
Minimum Concrete Thickness	h_{min}	[mm]	h_{ef} + 30mm ≥ 100mm			h_{ef} + 2d_o		
Spacing - Tension (Standard Embedment) Dry and Wet holes	S_{std}	[mm]	155	195	225	300	355	410
Edge Distance - Tension (Standard Embedment) Dry and Wet Holes	$c_{N,std}$	[mm]	80	100	115	150	180	205
Spacing - Tension (Standard Embedment) Flooded holes	S_{std}	[mm]	155	195	225	285	330	375
Edge Distance - Tension (Standard Embedment) Flooded holes	$c_{N,std}$	[mm]	80	100	115	145	165	190
Edge Distance - Shear (Standard Embedment) 5.8 Stud	$c_{V,std}$	[mm]	70	95	115	175	250	360
Edge Distance - Shear (Standard Embedment) 8.8 Stud	$c_{V,std}$	[mm]	100	130	165	280	390	515
Edge Distance - Shear (Standard Embedment) A4-70 Stud	$c_{V,std}$	[mm]	75	100	120	190	290	415
Minimum Spacing	s_{min}	[mm]	40	50	60	80	100	120
Minimum Edge Distance	c_{min}	[mm]	40	50	60	80	100	120

Edge Distances are based on minimum concrete thickness for variations in Concrete Thickness, Spacing and Edge Distance refer to DesignFix for calculations

Load Data

Standard Embedment Depth

(Non-Cracked Concrete, Hammer Drilling and Compressed Air Drilling) *(Dry and Wet Holes)*

Threaded Stud Diameter			M8	M10	M12	M16	M20	M24
Characteristics Resistance								
Tensile	N_{Rk}	[kN]	14.0	19.7	26.9	40.8	64.0	87.0
Shear	V_{Rk}	[kN]	9.0	15.0	21.0	39.0	61.0	88.0
		[kN]	15.0	23.0	34.0	63.0	106.8	142.5
		[kN]	13.0	20.0	30.0	55.0	86.0	124.0
Design Resistance								
Tensile	N_{Rd}	[kN]	7.8	11.0	14.9	19.4	30.5	41.4
Shear	V_{Rd}	[kN]	7.2	12.0	16.8	31.2	48.8	70.4
		[kN]	12.0	18.4	27.2	50.0	71.2	195.0
		[kN]	8.3	12.8	19.2	35.2	55.1	79.4
Recommended Resistance								
Tensile	N_{rec}	[kN]	5.6	7.9	10.6	13.9	21.8	29.6
Shear	V_{rec}	[kN]	5.1	8.6	12.0	22.3	34.9	50.3
		[kN]	8.6	13.1	19.4	35.7	50.9	139.3
		[kN]	5.9	9.1	13.7	25.1	39.4	56.7

(Non-Cracked Concrete, Hammer Drilling and Compressed Air Drilling) *(Flooded Holes)*

Threaded Stud Diameter			M8	M10	M12	M16	M20	M24
Characteristics Resistance								
Tensile	N_{Rk}	[kN]	14	19.7	26.9	37.7	53.4	71.2
Shear	V_{Rk}	[kN]	9.0	15.0	21.0	39.0	61.0	88.0
		[kN]	15.0	23.0	34.0	63.0	106.8	142.5
		[kN]	13.0	20.0	30.0	55.0	86.0	124.0
Design Resistance								
Tensile	N_{Rd}	[kN]	7.8	11.0	14.9	17.9	25.4	33.9
Shear	V_{Rd}	[kN]	7.2	12.0	16.8	31.2	48.8	70.4
		[kN]	12.0	18.4	27.2	50.0	71.2	195.0
		[kN]	8.3	12.8	19.2	35.2	55.1	79.4
Recommended Resistance								
Tensile	N_{rec}	[kN]	5.6	7.9	10.6	12.8	18.1	24.2
Shear	V_{rec}	[kN]	5.1	8.6	12.0	22.3	34.9	50.3
		[kN]	8.6	13.1	19.4	35.7	50.9	139.3
		[kN]	5.9	9.1	13.7	25.1	39.4	56.7

Recommended Resistance includes Partial Safety Factor γ = 1.4 in the absence of national regulations Data is for Static and Quasi Static Loads for a single anchor

Increasing Factors

Threaded Stud Diameter		M8	M10	M12	M16	M20	M24
Ψc C30/37	[-]	1.0					
Ψc C40/50	[-]	1.0					
Ψc C50/60	[-]	1.0					

When using increasing factors care must be taken not to exceed steel limits

Steel Limits

Grade 5.8

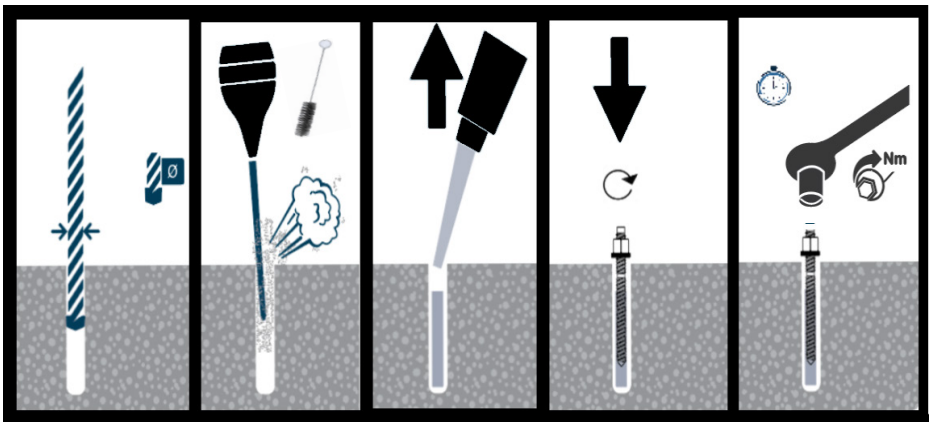
Threaded Stud Diameter			M8	M10	M12	M16	M20	M24
Characteristic Tensile Resistance	$N_{Rk,s}$	[kN]	18	29.0	42.0	78.0	122.0	176.0
Partial safety factor	γ_{MsN}	[-]	1.5					
Characteristic Shear Resistance	$V_{Rk,s}$	[kN]	9	15	21	39	61	88.0
Partial Safety Factor	γ_{MsV}	[-]						

Grade 8.8

Threaded Stud Diameter			M8	M10	M12	M16	M20	M24
Characteristic Tensile Resistance	$N_{Rk,s}$	[kN]	29.0	46.0	67.0	125.0	196.0	282.0
Partial safety factor	γ_{MsN}	[-]	1.5					
Characteristic Shear Resistance	$V_{Rk,s}$	[kN]	15.0	23.0	34.0	63.0	98.0	141.0
Partial Safety Factor	γ_{MsV}	[-]	1.25					

Stainless Steel A4-70

Threaded Stud Diameter			M8	M10	M12	M16	M20	M24
Characteristic Tensile Resistance	$N_{Rk,s}$	[kN]	26.0	41.0	59.0	110.0	171.0	247.0
Partial safety factor	γ_{MsN}	[-]	1.87					
Characteristic Shear Resistance	$V_{Rk,s}$	[kN]	13.0	20.0	30.0	55.0	86.0	124.0
Partial Safety Factor	γ_{MsV}	[-]	1.56					



Accessories:

Cartridge Nozzle
& Extension
TCN01 & TCN03

TCM420MTP