TRUTEK TCM 400/600 PE INJECTION RESIN REBAR

Usage:

- Installation of Rebar
- Approved for cracked and non-cracked concrete
- Can be used in dry wet and flooded holes
- Class A1 reaction to fire
- High loading capacity

VOC CLASSIFICATION A+ (A+ A B C)

ETA-20/0150

DesignFiX®

WRAS APPROVED MATERIAL

Advantages:

- Transfer of the highest loads in cracked and non-cracked concrete
- High adhesion and low shirnkage ensures maximum bond strength
- Does not react with chemicals and water after bonding
- WRAS certificate allows the use of resin for fastening drinking water installations
- Ageing resistant resin
- Oderless resin - does not contain Stryene
- Extended gel and bonding time allows deep bonding of threaded rods and reinforcing bars

Resin setting times								
Substrate temperature	°C	5	10	15	20	25	30	40
Gel time	min.	70	32	28	25	22	20	18
Cure time in dry concrete	hour.	60	40	30	18	17	16	12

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 20/0150 Issued 15/01/2020

Installation Data

Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25
Nominal drill hole diameter	d_o	[mm]	12	14	16	18	20	22/24	32
Diameter of steel brush	d_b	[mm]	12	14	16	18	20	24	32
Minimum Effective Anchorage Depth	$h_{ef,min}$	[mm]	60	60	70	75	80	90	100
Maximum Effective Anchorage Depth	$h_{ef,max}$	[mm]	160	200	240	280	320	400	500
Standard Effective Anchorage Depth	$h_{ef,std}$	[mm]	80	90	110	125	125	170	210
Spacing - Tension (Standard Embedment)	S_{std}	[mm]	185	245	305	355	380	510	630
Edge Distance - Tension (Standard Embedment)	$c_{N,std}$	[mm]	95	125	155	180	190	255	315
Edge Distance - Shear (Standard Embedment)	$c_{V,std}$	[mm]	90	120	150	180	215	285	405
Minimum Concrete Thickness	h_{min}	[mm]	h_{ef} + 30mm ≥ 100mm		h_{ef} + $2d_o$				
Minimum Spacing	s_{min}	[mm]	40	40	60	60	80	100	120
Minimum Edge Distance	c_{min}	[mm]	40	40	60	60	80	100	120

For reductions in Spacing and Edge Distance refer to DesignFix for calculations

Load Data

Standard Embedment

Characteristics Resistance (Non-Cracked concrete, Hammer Drilling and Compressed Air Drilling) (Dry and Wet Holes)

Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25
Tensile	N_{Rk}	[kN]	20.1	31.1	49.8	66.0	68.7	109.0	149.7
Shear	V_{Rk}	[kN]	13.8	21.7	31.1	42.4	55.3	86.4	135.0

Design Resistance

Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25
Tensile	N_{Rd}	[kN]	9.5	14.8	23.7	31.4	38.1	60.5	83.1
Shear	V_{Rd}	[kN]	9.1	14.4	20.7	28.2	36.8	57.6	90.0

Recommended Resistance

Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25
N_{rec}	N_{rec}	[kN]	6.8	10.6	16.9	22.4	26.2	43.2	59.3
V_{rec}	V_{rec}	[kN]	6.5	10.3	14.8	20.1	26.3	41.1	64.3

Includes Partial Safety Factor γ = 1.4 in the absence of national regulations and type of loading Data is for Static and Quasi Static Loads for a single anchor

Characteristics Resistance (Non-Cracked concrete, Hammer Drilling and Compressed Air Drilling) (Flooded Holes)

Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25
N_{Rk}		[kN]	20.1	31.1	49.8	66.0	68.7	109.0	149.7
V_{Rk}		[kN]	13.8	21.7	31.1	42.4	55.3	86.4	135.0

Design Resistance

Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25
N_{Rd}		[kN]	9.5	14.8	23.7	31.4	32.7	51.9	71.2
V_{Rd}		[kN]	9.1	14.4	20.7	28.2	36.9	57.6	90.0

Recommended Resistance

Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25
N_{rec}		[kN]	6.8	10.6	16.9	22.4	23.3	37.0	50.8
V_{rec}		[kN]	6.5	10.3	14.8	20.1	26.3	41.1	64.3

Includes Partial Safety Factor γ = 1.4 in the absence of national regulations and type of loading Data is for Static and Quasi Static Loads for a single anchor

Characteristics Resistance (Cracked concrete, Hammer Drilling and Compressed Air Drilling) (Dry and Wet Holes)

Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25
N_{Rk}		[kN]	-	-	27.0	35.7	40.8	69.4	104.7
V_{Rk}		[kN]	-	-	31.1	42.4	55.3	86.4	135.0

Design Resistance

Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25
N_{Rd}		[kN]	-	-	12.8	17.0	22.6	38.5	58.2
V_{Rd}		[kN]	-	-	20.7	28.3	36.9	57.6	90.0

Recommended Resistance

Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25
N_{rec}		[kN]	-	-	9.2	12.2	16.2	27.5	41.5
V_{rec}		[kN]	-	-	14.8	20.2	26.3	41.1	64.3

Includes Partial Safety Factor γ = 1.4 in the absence of national regulations and type of loading Data is for Static and Quasi Static Loads for a single anchor

Characteristics Resistance (Cracked concrete, Hammer Drilling and Compressed Air Drilling) (Flooded Holes)

Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25
N_{Rk}		[kN]	-	-	26.9	35.7	40.8	69.4	104.7
V_{Rk}		[kN]	-	-	31.1	42.4	55.3	86.4	135.0

Design Resistance

Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25
N_{Rd}		[kN]	-	-	12.8	17.0	19.4	33.1	49.9
V_{Rd}		[kN]	-	-	20.7	28.3	36.9	57.6	90.0

Recommended Resistance

Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25
N_{rec}		[kN]	-	-	9.2	12.2	13.9	23.6	35.6
V_{rec}		[kN]	-	-	14.8	20.2	26.3	41.1	64.3

Includes Partial Safety Factor γ = 1.4 in the absence of national regulations and type of loading Data is for Static and Quasi Static Loads for a single anchor

Increasing Factor

Increasing factor for non-cracked concrete (all types of drilling)

Rebar Diameter		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25
Ψc C25/30	[-]	1.04						
Ψc C30/37	[-]	1.08						
Ψc C35/45	[-]	1.11						
Ψc C40/50	[-]	1.15						
Ψc C45/55	[-]	1.18						
Ψc C50/60	[-]	1.21						

Increasing factor for cracked concrete (all types of drilling)

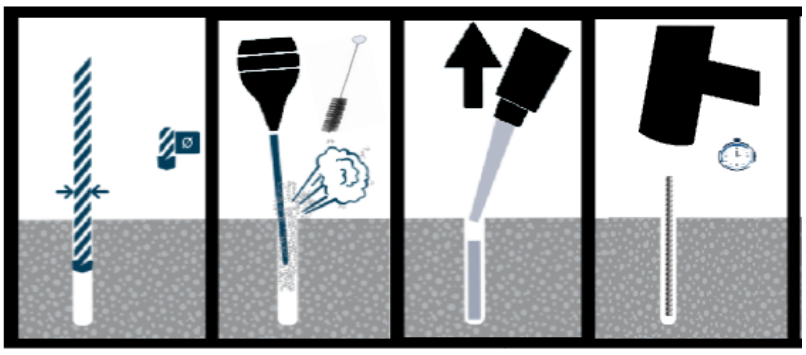
Rebar Diameter		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25
Ψc C25/30	[-]	1.00	1.00	1.08	1.08	1.08	1.08	1.11
Ψc C30/37	[-]	1.00	1.00	1.17	1.17	1.17	1.17	1.22
Ψc C35/45	[-]	1.00	1.00	1.24	1.24	1.24	1.24	1.31
Ψc C40/50	[-]	1.00	1.00	1.32	1.32	1.32	1.32	1.41
Ψc C45/55	[-]	1.00	1.00	1.37	1.37	1.37	1.37	1.48
Ψc C50/60	[-]	1.00	1.00	1.42	1.42	1.42	1.42	1.55

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

Steel Limits

Steel limits

Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25
Characteristic Tensile Resistance	$N_{Rk,s}$	[kN]	27.7	43.2	62.2	84.7	110.6	172.7	270.1
Partial Safety Factor	γ_{MsN}	[-]	1.4						
Characteristic Shear Resistance	$V_{Rk,s}$	[kN]	13.8	21.6	31.1	42.4	55.3	86.4	135.0
Partial Safety Factor	γ_{MsV}	[-]	1.5						



Accessories:

Cartridge Nozzle
& Extension
TCN01 & TCN03

TCM400MTP

Tel.: +48 22 701 93 24-25
Fax: +48 22 100 12 3
www.trutekfasteners.eu
e-mail: info@trutek.com.pl