

## TRUTEK TCM FX - TE 500 INJECTION RESIN

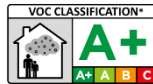
### Pure Epoxy - REBAR INSTALLATION

#### Usage:

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

#### Advantages:

- Long cure time to allow deep embedment installation
- Suitable for concrete from C20/25 to C50/60
- Range of Embedment Depths



Concrete Ranges:	C20/25 to C0/60 according to EN 206:2013+A1:2016
Certification:	European Technical Assessment ETA 23/0773 issued 02/11/23

#### Curing time in dry concrete

Concrete Temperature	Minimum Curing time	Maximum Curing time
+10°C	600 min	48 hrs
+15°C	150 min	30hrs
+20°C	60 min	24 hrs
+25°C	30 min	15 hrs
+30°C	15 min	10 hrs
+40°C	8 min	6 hrs

#### Curing time in wet concrete

Concrete Temperature	Minimum Curing time	Maximum Curing time
+10°C	720 min	72 hrs
+15°C	180 min	45 hrs
+20°C	80 min	36 hrs
+25°C	40 min	20 hrs
+30°C	20 min	12 hrs
+40°C	11 min	8 hrs

The Load Data on the following pages assumes the following:

- Concrete C20/25 ( $f_{ck,cube} = 25 \text{ N/mm}^2$ )
- No Edge and Spacing reductions
- Minimum base material thickness
- Correct installation
- Standard cleaning

### Installation Data

Rebar Diameter			Ø10	Ø12	Ø16	Ø20	Ø25	Ø32
Nominal drill hole diameter	$d_o$	[mm]	14	16	20	25	30	40
Diameter of steel brush	$d_b$	[mm]	16	18	22	30	40	45
Minimum Effective Anchorage Depth	$h_{ef,min}$	[mm]	60	70	80	90	100	128
Maximum Effective Anchorage Depth	$h_{ef,max}$	[mm]	200	240	320	400	500	640
Standard Effective Anchorage Depth	$h_{ef,std}$	[mm]	90	110	145	180	225	290
Spacing - Tension (Standard Embedment) (Dry/Wet Concrete)	$S_{std}$	[mm]	245	290	380	450	620	870
Edge Distance - Tension (Standard Embedment) (Dry/Wet Concrete)	$c_{N,std}$	[mm]	125	150	190	240	320	435
Edge Distance - Shear (Standard Embedment) (Dry/Wet Concrete)	$c_{V,std}$	[mm]	120	145	210	280	400	660
Minimum Concrete Thickness	$h_{min}$	[mm]	$h_{ef} + 30\text{mm} \geq 100\text{mm}$			$h_{ef} + 2d_o$		
Minimum Spacing	$S_{min}$	[mm]	50	60	80	100	125	160
Minimum Edge Distance	$c_{min}$	[mm]	45	45	50	65	70	80

## Load Data

### Standard Embedment Depth

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

Rebar Diameter			Ø10	Ø12	Ø16	Ø20	Ø25	Ø32
Tensile	$N_{Rk}$	[kN]	31.1	45.6	76.5	107.4	159.0	242.9
Shear	$V_{Rk}$	[kN]	22.0	31.0	55.0	86.0	135.0	221.0

### Design Resistance

Rebar Diameter			Ø10	Ø12	Ø16	Ø20	Ø25	Ø32
Tensile	$N_{Rd}$	[kN]	14.8	21.7	36.4	51.1	75.7	115.7
Shear	$V_{Rd}$	[kN]	14.6	20.6	36.6	57.3	90.0	147.3

### Recommended Resistance

Rebar Diameter			Ø10	Ø12	Ø16	Ø20	Ø25	Ø32
$N_{rec}$	$N_{rec}$	[kN]	10.6	15.5	26.0	36.5	54.1	82.6
$V_{rec}$	$V_{rec}$	[kN]	10.4	14.7	26.1	40.9	64.3	105.2

## Increasing Factor

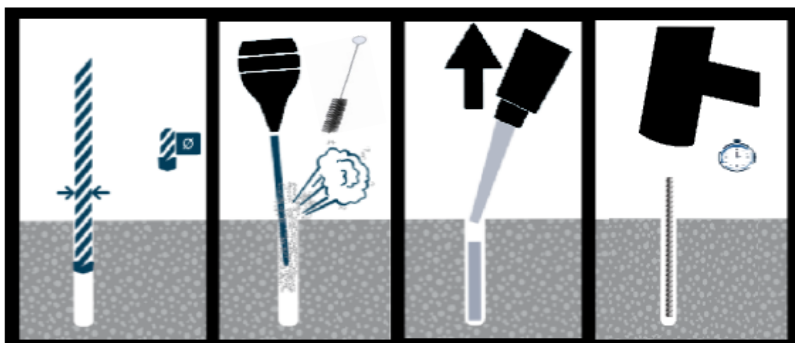
Rebar Diameter			Ø10	Ø12	Ø16	Ø20	Ø24	Ø25
$\Psi_c$ C30/37		[-]	1.00					
$\Psi_c$ C40/50		[-]	1.10					
$\Psi_c$ C50/60		[-]	1.10					

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

## Steel Limits

Rebar Diameter			Ø10	Ø12	Ø16	Ø20	Ø25	Ø32
Characteristic Tensile Resistance	$N_{Rk,s}$	[kN]	43.0	62.0	111.0	173.0	270	442
Partial safety factor	$\gamma_{MsN}$	[-]	1.4					
Characteristic Shear Resistance	$V_{Rk,s}$	[kN]	22	31	55	86	135	221.0
Partial Safety Factor	$\gamma_{Msv}$	[-]	1.5					
Characteristic Bending Moment	$M^0_{Rk,s}$	[Nm]	$1.2 \cdot W_{el} \cdot \sigma_{yk}^{(1)}$					
Partial Safety Factor	$\gamma_{MsN}$	[-]	1.5					

<sup>(1)</sup> Taken from the specification for reinforcing bars



Accessories:



Cartridge Nozzle & Extension  
TCN01 & TCN03



TCM585MT

