

## TRUTEK TCM 100/500 INJECTION RESIN

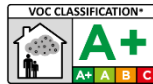
### Pure Epoxy

#### Usage:

- Installation of threaded studs and 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
- C1 & C2 Seismic performance

#### Advantages:

- Suitable for high loads featuring large diameters and deep embedments.
- Longer working times make it suitable for large holes, and high temperatures.
- No shrinkage, good for large diameter fixings.
- Use in wet or flooded environments and fixing holes, or underwater.
- High durability, resistance to chemicals.
- Used for diamond drilled holes.
- Solvent free resin.
- Fixings in concrete, wood, or other high strength materials.



Concrete Temperature	Gel / working time	Minimum Curing time
+5°C	70 min	60 hrs
+10°C	32 min	40 hrs
+15°C	28 min	30 hrs
+20°C	25 min	18 hrs
+25°C	22 min	17 hrs
+30°C	20 min	16 hrs
+40°C	18 min	12 hrs

Concrete Ranges:	C20/25 to C0/60 according to EN 206:2013+A1:2016
Certification:	European Technical Assessment ETA 20/0059 & 20/0150

### Installation Data

Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø24	Ø25	Ø28	Ø30	Ø32	
Nominal drill hole diameter	$d_o$	[mm]	10/12	12/14	14/16	18	20	24	30/32	32	32/35	35	40	
Effective anchorage depth	$h_{ef,min}$	[mm]	60	60	70	75	80	90	96	100	112	120	128	
	$h_{ef,max}$	[mm]	160	200	240	280	320	400	480	500	560	600	640	
Diameter of steel brush	$d_b$	[mm]	10/12	12/14	14/16	18	20	24	30/32	32	32/35	35	40	
Minimum member thickness	$h_{min}$	[mm]	$h_{ef} + 30 \text{ mm} \leq 100 \text{ mm}$					$h_{ef} + 2d_o$						
Minimum spacing	$S_{min}$	[mm]	40	40	60	60	75	95	120	120	130	140	150	
Minimum edge distance	$C_{min}$	[mm]	35	40	45	50	50	60	70	70	75	115	120	

## Load Data

Temperature Range 40°C/24°C

Embedment depth = 10 x Bar Diameter

Characteristic resistance			(Non-cracked concrete. Hamer drilling and compressed air drilling)					(Dry and Wet concrete)				
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rk}$	[kN]	25.0	40.0	57.0	77.0	101.0	155.6	217.4	257.7	285.8	314.8
Shear	$V_{rk}$	[kN]	12.5	19.8	28.3	38.5	50.25	78.5	122.8	154.0	176.8	201.0

Design resistance			(Non-cracked concrete. Hamer drilling and compressed air drilling)					(Dry and wet concrete)				
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rd}$	[kN]	17.9	28.6	40.7	55.0	72.1	86.4	120.8	143.2	158.8	174.9
Shear	$V_{rd}$	[kN]	8.3	13.2	18.8	25.7	33.5	52.3	81.8	102.7	117.8	134.0

Recommended resistance			(Non-cracked concrete. Hamer drilling and compressed air drilling)					(Dry and Wet concrete)				
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rec}$	[kN]	12.8	20.4	29.1	39.3	51.5	61.7	86.3	102.3	113.4	124.9
Shear	$V_{rec}$	[kN]	6.0	9.4	13.5	18.3	23.9	37.4	58.5	73.3	84.2	95.7

Characteristic resistance			(Non-cracked concrete. Hamer drilling and compressed air drilling)					(Flooded bore hole)				
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rk}$	[kN]	25.0	40.0	57.0	77.0	101.0	134.4	168	187.4	194.9	214.7
Shear	$V_{rk}$	[kN]	12.5	19.8	28.3	38.5	50.25	78.5	122.8	154.0	176.8	201.0

Design resistance			(Non-cracked concrete. Hamer drilling and compressed air drilling)					(Flooded bore hole)				
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rd}$	[kN]	17.9	23.8	33.9	45.8	60.1	53.3	66.7	74.4	77.3	85.2
Shear	$V_{rd}$	[kN]	8.3	13.2	18.8	25.7	33.5	52.3	81.8	102.7	117.8	134.0

Recommended resistance			(Non-cracked concrete. Hamer drilling and compressed air drilling)					(Flooded bore hole)				
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rec}$	[kN]	12.8	17.0	24.2	32.7	42.9	38.1	47.6	53.1	55.2	60.9
Shear	$V_{rec}$	[kN]	6.0	9.4	13.5	18.3	23.9	37.4	58.5	73.3	84.2	95.7

Characteristic resistance			(Cracked concrete. Hamer drilling and compressed air drilling)					(Dry and Wet concrete)				
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rk}$	[kN]	-	-	42.7	58.0	70.4	99.0	138.3	175.7	194.9	214.7
Shear	$V_{rk}$	[kN]	-	-	28.3	38.5	50.25	78.5	122.8	154.0	176.8	201.0

Design resistance			(Cracked concrete. Hamer drilling and compressed air drilling)					(Dry and Wet concrete)				
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rd}$	[kN]	-	-	23.7	32.2	39.1	55.0	76.8	97.6	108.3	119.3
Shear	$V_{rd}$	[kN]	-	-	18.8	25.7	33.5	52.3	81.8	102.7	117.8	134.0

Recommended resistance			(Cracked concrete. Hamer drilling and compressed air drilling)					(Dry and Wet concrete)				
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rec}$	[kN]	-	-	16.9	23.0	27.9	39.3	54.9	69.7	77.3	85.2
Shear	$V_{rec}$	[kN]	-	-	13.5	18.3	23.9	37.4	58.5	73.3	84.2	95.7

Characteristic resistance			(Cracked concrete. Hamer drilling and compressed air drilling)					(Flooded bore hole)				
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rk}$	[kN]	-	-	42.7	54.0	70.8	84.9	118.6	140.6	155.9	171.7
Shear	$V_{rk}$	[kN]	-	-	28.3	38.5	50.25	78.5	122.8	154.0	176.8	201.0

Design resistance			(Cracked concrete. Hamer drilling and compressed air drilling)					(Flooded bore hole)				
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rd}$	[kN]	-	-	19.8	25.0	32.8	33.7	47.1	55.8	61.9	68.1
Shear	$V_{rd}$	[kN]	-	-	18.8	25.7	33.5	52.3	81.8	102.7	117.8	134.0

Recommended resistance			(Cracked concrete. Hamer drilling and compressed air drilling)					(Flooded bore hole)				
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rec}$	[kN]	-	-	14.1	17.9	23.4	24.1	33.6	39.9	44.2	48.7
Shear	$V_{rec}$	[kN]	-	-	13.5	18.3	23.9	37.4	58.5	73.3	84.2	95.7

## Load Data

Temperature Range 40°C/24°C

Embedment depth = 10 x Bar Diameter

Characteristic resistance			(Non-cracked concrete. Hamer drilling and compressed air drilling)							(Dry and Wet concrete)		
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rk}$	[kN]	25.0	40.0	57.0	77.0	101.0	141.4	197.6	234.3	259.8	286.2
Shear	$V_{rk}$	[kN]	12.5	19.8	28.3	38.5	50.25	78.5	122.8	154.0	176.8	201.0

Design resistance			(Non-cracked concrete. Hamer drilling and compressed air drilling)							(Dry and wet concrete)		
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rd}$	[kN]	17.9	28.6	40.7	55.0	72.1	78.6	109.8	130.2	144.3	159.0
Shear	$V_{rd}$	[kN]	8.3	13.2	18.8	25.7	33.5	52.3	81.8	102.7	117.8	134.0

Recommended resistance			(Non-cracked concrete. Hamer drilling and compressed air drilling)							(Dry and Wet concrete)		
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rec}$	[kN]	12.8	20.4	29.1	39.3	51.5	56.1	78.4	93.0	103.1	113.6
Shear	$V_{rec}$	[kN]	6.0	9.4	13.5	18.3	23.9	37.4	58.5	73.3	84.2	95.7

Characteristic resistance			(Non-cracked concrete. Hamer drilling and compressed air drilling)							(Flooded bore hole)		
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rk}$	[kN]	25.0	40.0	57.0	77.0	101.0	127.3	148.2	175.7	181.9	200.4
Shear	$V_{rk}$	[kN]	12.5	19.8	28.3	38.5	50.25	78.5	122.8	154.0	176.8	201.0

Design resistance			(Non-cracked concrete. Hamer drilling and compressed air drilling)							(Flooded bore hole)		
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rd}$	[kN]	17.9	23.8	33.9	45.8	60.1	50.5	58.8	69.7	72.2	79.5
Shear	$V_{rd}$	[kN]	8.3	13.2	18.8	25.7	33.5	52.3	81.8	102.7	117.8	134.0

Recommended resistance			(Non-cracked concrete. Hamer drilling and compressed air drilling)							(Flooded bore hole)		
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rec}$	[kN]	12.8	17.0	24.2	32.7	42.9	36.1	42.0	49.8	51.6	56.8
Shear	$V_{rec}$	[kN]	6.0	9.4	13.5	18.3	23.9	37.4	58.5	73.3	84.2	95.7

Characteristic resistance			(Cracked concrete. Hamer drilling and compressed air drilling)							(Dry and Wet concrete)		
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rk}$	[kN]	-	-	39.4	49.7	65.8	91.9	128.5	164.0	181.9	200.4
Shear	$V_{rk}$	[kN]	-	-	28.3	38.5	50.25	78.5	122.8	154.0	176.8	201.0

Design resistance			(Cracked concrete. Hamer drilling and compressed air drilling)							(Dry and Wet concrete)		
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rd}$	[kN]	-	-	28.1	35.5	47.0	51.1	71.4	91.1	101.1	111.3
Shear	$V_{rd}$	[kN]	-	-	18.8	25.7	33.5	52.3	81.8	102.7	117.8	134.0

Recommended resistance			(Cracked concrete. Hamer drilling and compressed air drilling)							(Dry and Wet concrete)		
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rec}$	[kN]	-	-	20.1	25.4	33.6	36.5	51.0	65.1	72.2	79.5
Shear	$V_{rec}$	[kN]	-	-	13.5	18.3	23.9	37.4	58.5	73.3	84.2	95.7

Characteristic resistance			(Cracked concrete. Hamer drilling and compressed air drilling)							(Flooded bore hole)		
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rk}$	[kN]	-	-	39.4	49.7	65.8	91.9	108.7	128.8	142.9	157.4
Shear	$V_{rk}$	[kN]	-	-	28.3	38.5	50.25	78.5	122.8	154.0	176.8	201.0

Design resistance			(Cracked concrete. Hamer drilling and compressed air drilling)							(Flooded bore hole)		
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rd}$	[kN]	-	-	18.2	23.0	30.5	36.5	43.1	51.1	56.7	62.5
Shear	$V_{rd}$	[kN]	-	-	18.8	25.7	33.5	52.3	81.8	102.7	117.8	134.0

Recommended resistance			(Cracked concrete. Hamer drilling and compressed air drilling)							(Flooded bore hole)		
Rebar Diameter			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Tensile	$N_{rec}$	[kN]	-	-	13.0	16.4	21.8	26.0	30.8	36.5	40.5	44.6
Shear	$V_{rec}$	[kN]	-	-	13.5	18.3	23.9	37.4	58.5	73.3	84.2	95.7

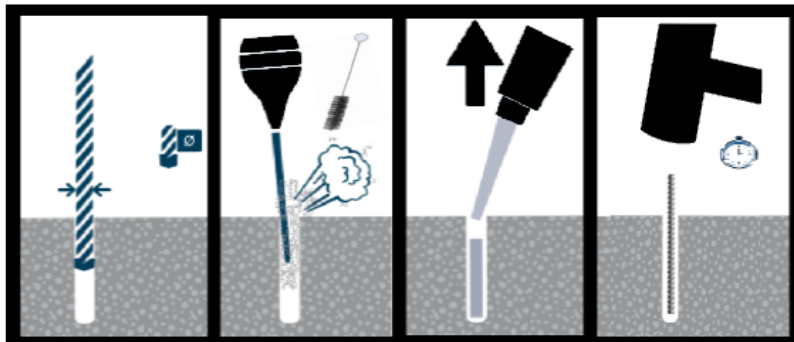
## Increasing Factor

		Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Increasing factor for Non-Cracked concrete	C25/30	1.04							1.06	1.08	1.04
	C30/37	1.08							1.13	1.17	1.08
	C35/45	1.11							1.17	1.24	1.11
	C40/50	1.15							1.23	1.30	1.15
	C45/55	1.18							1.17	1.36	1.18
	C50/60	1.2							1.32	1.42	1.20
Increasing factor for cracked concrete	C25/30	1.0	1.0	1.08	1.08	1.08	1.08	1.11	1.04	1.04	1.04
	C30/37	1.0	1.0	1.18	1.18	1.18	1.18	1.22	1.08	1.08	1.08
	C35/45	1.0	1.0	1.25	1.25	1.25	1.25	1.31	1.12	1.12	1.12
	C40/50	1.0	1.0	1.32	1.32	1.32	1.32	1.41	1.15	1.15	1.15
	C45/55	1.0	1.0	1.38	1.38	1.38	1.38	1.49	1.17	1.17	1.17
	C50/60	1.0	1.0	1.44	1.44	1.44	1.44	1.58	1.20	1.20	1.20

When using increasing factors ensure that steel limits are not exceeded

## Steel Limits

			Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø28	Ø30	Ø32
Characteristic Tensile Limit	$N_{Rks}^0$	[Kn]	25.0	39.5	56.5	77.0	100.5	157.0	245.5	308.0	353.5	402.0
Characteristic Shear Limit	$V_{Rks}^0$	[Kn]	12.5	19.75	28.25	38.5	50.25	78.5	122.75	154.0	176.75	201.0



Accessories:

