

## INJECTION RESIN TRUTEK TCM MPRO

### Usage:

- sticking threaded rods in concrete, reinforced concrete, natural stone and masonry substrates
- fastening light construction structures, roofs, barriers, balustrades and handrails
- fixing all types of equipment in various building substrates
- fixing of fence panels, entrance gates and garage doors
- fixing in hollow substrates using TPS and TMS perfused sleeves

### Advantages:

- universal resin for various building substrates
- unscented resin - does not contain styrene
- adheres perfectly to porous substrates
- highest strength parameters in masonry substrates
- resin available in 420ml and 300ml tubes
- for use in a wide range of TCS threaded rod types, galvanized steel, hot-dip galvanized steel, A2 and A4 stainless steel and stainless steel with increased corrosion resistance 1.4529

DesignFix®

VOC CLASSIFICATION\*  
**A+**  
A+ A B C

STYRENE FREE  
STYRENE FREE

PZH  
POLSKA PUBLICZNA  
AGENCJA  
BUDOWLANA

WYRÓB  
BUDOWLANY

ETA  
CE  
ETA-19/0153



		Resin setting times					
Substrate temperature	°C	35	25	15	5	-5	-10*
Gel time	min	3	8	13	21	50	60
Cure time	min	20	20	20	30	90	180

### Anchor rod material:

Threaded rods are made of ordinary carbon steel in the mechanical properties class 4.6, 5.8 and 8.8 are covered with a layer of galvanic zinc coating min. 5µm or fire up to 45µm. Threaded rods made of stainless steel, A2 and A4 class.

### Substrate material:

Non-cracked concrete, minimum class C20 / 25, full brick, class 15, silicate brick, class 15, and perforated brick, class 7.5;

### TCM MPRO resin with threaded rods in non-cracked concrete

Resin / type of anchored rod	TCM MPRO / TCS threaded rod steel class 5.8			
Rod diameter d [mm]	M8	M10	M12	M16
Design load-bearing capacity for pulling out of non-cracked concrete NRd [kN]	4,3	6,2	8,0	10,4
Shear load capacity in non-cracked concrete VRd [kN]	7,2	12,0	16,8	31,19
Hole / drill diameter up to [mm]	10	12	14	18
Hole depth h1 [mm]	85	95	115	130
Effective anchorage depth hef [mm]	80	90	110	125
Substrate thickness hmin [mm]	100	120	125	140
Minimum spacing between smin anchors [mm]	40	45	55	65
Minimum distance from the edge cmin [mm]	40	45	55	65
Required tightening torque Tinst [Nm]	8	10	15	25
Approximate amount of resin per hole in [ml]	3,7	5,1	7,4	11,1
Number of mounts from one tube - 420ml capacity	131	82	56,7	37,8

Technical data Trutek TCM M PRO based on the strength of concrete C20 / 25 (according to PN-EN 206-1: 2003).

The entire European Technical Assessment No. ETA-19/0153 should be taken into account when designing

### TCM MPRO resin with TCS threaded rods in solid masonry substrates

Resin / type of anchored rod	TCM MPRO / TCS threaded rods, steel class 5.8											
	FULL BRICK 15 grade				FULL SILICATE BRICK 15 grade				FULL CLINKER BRICK grade 35			
Type of ground												
Rod diameter d [mm]	M8	M10	M12	M16	M8	M10	M12	M16	M8	M10	M12	M16
Design loads for pulling and shearing NRd and VRd [kN]	1,68	2,6	3,12	3,36	3,1	3,2	3,8	4,1	2,3	3,0	3,7	4,6
Hole / drill diameter up to [mm]	10	12	14	18	10	12	14	18	10	12	14	18
Hole depth h1 [mm]	85	95	115	130	85	95	115	130	85	95	115	130
Effective anchorage depth hef [mm]	80	90	110	125	80	90	110	125	80	90	110	125
Substrate thickness hmin [mm]	100	120	125	140	100	120	125	140	100	120	125	140
Distance between anchors Smin [mm]	120	135	165	188	120	135	165	188	120	135	165	188
Distance from the edge Cmin [mm]	240	270	330	390	240	270	330	390	240	270	330	390
Required tightening torque Tinst [Nm]	4	6	8	10	4	6	8	10	15	30	50	80
Approximate amount of resin per hole in [ml]	4	5	8	12	4	5	8	12	4	5	8	12
Number of mounts from one tube - 420ml capacity	105	80	50	35	105	80	50	35	105	80	50	35

Technical data Trutek TCM 420M PRO were developed in accordance with ITB-KOT-2018/0124 edition 2 for the following strength of substrates:

- full ceramic brick, class 15 PN-EN 771-1: 2015 standards;
- full silicate brick class 15 according to PN-EN 771-2: 2015 standards;
- full clinker brick, class 35 according to PN-EN 771-1: 2015 standards;

## TCM MPRO resin with TCS threaded rods in solid masonry substrates cont.

Resin / type of anchored rod	TCM MPRO / TCS threaded rods, steel class 5.8											
	Aerated concrete / YTONG grade 6				Aerated concrete / YTONG grade 4				Aerated concrete / YTONG grade 2			
	M8	M10	M12	M16	M8	M10	M12	M16	M8	M10	M12	M16
Type of ground												
Rod diameter d [mm]												
Design loads for pulling and shearing NRd and VRd [kN]	2,2	2,9	3,1	3,1	1,8	2,6	2,8	2,8	1,3	1,7	1,8	1,9
Hole / drill diameter up to [mm]	10	12	14	18	10	12	14	18	10	12	14	18
Hole depth h1 [mm]	85	95	115	130	85	95	115	130	85	95	115	130
Effective anchorage depth hef [mm]	80	90	110	125	80	90	110	125	80	90	110	125
Substrate thickness hmin [mm]	100	120	125	140	100	120	125	140	100	120	125	140
Distance between anchors Smin [mm]	120	135	165	188	120	135	165	188	120	135	165	188
Distance from the edge Cmin [mm]	240	270	330	390	240	270	330	390	240	270	330	390
Required tightening torque Tinst [Nm]	5	8	8	10	5	8	8	10	4	6	8	10
Approximate amount of resin per hole in [ml]	4	5	8	12	4	5	8	12	4	5	8	12
Number of mounts from one tube - 420ml capacity	105	80	50	35	105	80	50	35	105	80	50	35

Technical data Trutek TCM 420M PRO were developed in accordance with ITB-KOT-2018/0124 edition 2 for the following strength of substrates:

- aerated concrete e.g. YTONG class 6, density  $\geq 700$  by PN-EN 771-4 + A1: 2015 standards
- aerated concrete e.g. YTONG class 4, density  $\geq 650$  by PN-EN 771-4 + A1: 2015 standards
- aerated concrete e.g. YTONG class 2, density  $\geq 400$  by PN-EN 771-4 + A1: 2015 standards

## TCM MPRO resin with TCS threaded rods and TPS or TMS perforated sleeves in masonry substrates with holes

Resin / type of anchored rod	TCM MPRO / TCS threaded rods steel class 5.8 / TPS perforated sleeves or TMS mesh											
	CLINKER BRICK WITH HOLES OF CLASS 20				POORIZED CERAMIC FLUSHES, class 15				SILICATE BRICK WITH HOLES OF CLASS 15			
	M8	M10	M12	M16	M8	M10	M12	M16	M8	M10	M12	M16
Type of ground												
Rod diameter d [mm]												
Pull-out and shear load capacity NRd and VRd [kN]	1,8	3,3	3,7	4,0	0,9	1,6	1,6	1,7	1,8	3,3	3,7	4,0
Hole / drill diameter up to [mm]	12	16	16	20	12	16	16	20	12	16	16	20
Dimensions of the TPS or TMS perforated sleeve	12x50	15x85	15x85	20x85	12x50	15x85	15x85	20x85	12x50	15x85	15x85	20x85
Hole depth h1 [mm]	60	95	95	95	60	95	95	95	60	95	95	95
Effective anchorage depth hef [mm]	50	85	85	85	50	85	85	85	50	85	85	85
Substrate thickness hmin [mm]	80	110	110	110	80	110	110	110	80	110	110	110
Distance between anchors Smin [mm]	100	170	170	170	100	170	170	170	100	170	170	170
Distance from the edge Cmin [mm]	100	100	100	100	100	100	100	100	100	100	100	100
Required tightening torque Tinst [Nm]	5	8	8	10	5	8	8	10	5	8	8	10
Approximate amount of resin per hole in [ml]	7	20	20	30	7	20	20	30	7	20	20	30
Nbr of mounts from one tube - capacity 420 ml	60	21	21	14	60	21	21	14	60	21	21	14

Technical data Trutek TCM 420M PRO were developed in accordance with ITB-KOT-2018/0124 edition 2 for the following strength of substrates:

- clinker brick with holes class 20 according to PN-EN 771-1: 2015 standards (wall thickness  $\geq 10$ mm);
- class 15 ceramic hollow bricks according to PN-EN 771-1: 2015 standards (wall thickness  $\geq 12$ mm);
- silicate brick with holes of class 15 acc. PN-EN 771-2: 2015 standards (wall thickness  $\geq 15$ mm);

## TCM MPRO resin with TIS threaded sleeves in solid masonry substrates

Resin / type of anchored sleeve	TCM MPRO / TIS threaded sleeves / TPS perforated sleeves or TMS mesh sleeves											
	FULL BRICK 15 grade				Aerated concrete / YTONG class 6				Aerated concrete / YTONG class 4			
	TIS06	TIS08	TIS10	TIS12	TIS06	TIS08	TIS10	TIS12	TIS06	TIS08	TIS10	TIS12
Type of ground												
Rod diameter d [mm]												
Pull-out and shear load capacity NRd and VRd [kN]	2,6	2,4	6,7	8,2	1,0	2,3	2,7	2,8	0,3	1,2	1,5	1,6
Hole / drill diameter up to [mm]	10	14	16	18	10	14	16	18	10	14	16	18
Hole depth h1 [mm]	60	95	95	95	60	95	95	95	60	95	95	95
Effective anchorage depth hef [mm]	55	85	85	85	55	85	85	85	55	85	85	85
Substrate thickness hmin [mm]	80	110	110	110	80	110	110	110	80	110	110	110
Distance between anchors Smin [mm]	100	160	160	160	100	160	160	160	100	160	160	160
Distance from the edge Cmin [mm]	150	240	240	240	150	240	240	240	150	240	240	240
Required tightening torque Tinst [Nm]	4	10	13	24	4	10	13	24	4	10	13	24
Approximate amount of resin per hole in [ml]	2,6	6,7	8,0	9,5	2,6	6,7	8,0	9,5	2,6	6,7	8,0	9,5
Number of mounts from one tube - 420ml capacity	162	63	52	44	162	63	52	44	162	63	52	44

Technical data Trutek TCM 420M PRO were developed in accordance with ITB-KOT-2018/0124 edition 2 for the following strength of substrates:

- full ceramic brick, class 15 PN-EN 771-1: 2015 standards;
- aerated concrete e.g. YTONG class 6, density  $\geq 700$  by PN-EN 771-4 + A1: 2015 standards
- aerated concrete e.g. YTONG class 4, density  $\geq 650$  by PN-EN 771-4 + A1: 2015 standards

## TCM MPRO resin with TIS threaded sleeves and TPS or TMS perforated sleeves in masonry substrates with holes

Resin / type of anchored rod	TCM MPRO / TIS threaded sleeves / TPS perforated sleeves or TMS mesh sleeves			
Type of ground	POORIZED CERAMIC FLUSHES, class 15			
Rod diameter d [mm]	TIS06	TIS08	TIS10	TIS12
Design loads for pulling and shearing NRd and VRd [kN]	0,4	1,0	1,3	1,5
Hole / drill diameter up to [mm]	12	16	20	20
Dimensions of the TPS or TMS perforated sleeve	12x50	15x85	20x85	20x85
Hole depth h1 [mm]	60	95	95	95
Effective anchorage depth hef [mm]	50	85	85	85
Substrate thickness hmin [mm]	80	110	110	110
Distance between anchors Smin [mm]	100	170	170	170
Distance from the edge Cmin [mm]	100	100	100	100
Required tightening torque Tinst [Nm]	4	10	13	24
Approximate amount of resin per hole in [ml]	7	20	30	30
Number of mounts from one tube - 420ml capacity	60	21	14	14

Technical data Trutek TCM 420M PRO were developed in accordance with ITB-KOT-2018/0124 edition 2 for the following strength of substrates: - class 15 ceramic hollow bricks according to PN-EN 771-1: 2015 standards (wall thickness  $\geq 12\text{mm}$ );

## Chemical anchor rods and accessories

Rod diameter d [mm]	Hole diameter d <sub>o</sub> [mm]	Minimum substrate thickness h <sub>min</sub> [mm]	Hole depth h <sub>1</sub> [mm]	Nylon perforated sleeve TPS	Steel Mesh Sleeve TMS	TCS Anchor rod steel class 5.8 and 8.8	Anchor rod TCS G steel class 5.8 hot dipped galvanised	Anchor rod TCS 5SA4 stainless steel A4-316	Hole cleaning brush TCB	Drill Bits
8	10	100	85	-	-	TCS08110	TCS08110G	TCS08110SSA4	TCB08	TCPP10160
10	12	120	95	-	-	TCS10130	TCS10130G	TCS10130SSA4	TCB10	TCPP12160
12	14	125	115	-	-	TCS12160	TCS12160G	TCS12160SSA4	TCB12	TCPP14160
16	18	140	130	-	-	TCS16190	TCS16190G	TCS16190SSA4	TCB16	TCPP18210
8	12	120	60	TPS01	TMS12	TCS08110	TCS08110G	TCS08110SSA4	TCB12	TCPP12160
10	16	120	95	TPS02	TMS16	TCS10130	TCS10130G	TCS10130SSA4	TCB16	TCPP16160
12	16	120	95	TPS02	TMS16	TCS12160	TCS12160G	TCS12160SSA4	TCB16	TCPP16160
16	22	120	95	TPS04	TMS22	TCS16190	TCS16190G	TCS16190SSA4	TCB20	TCMU22340

