

Kimitech VINYL CTR

ST2-0221

Bi-component vinylester resin in cartridges for anchoring



DESCRIPTION

Kimitech VINYL CTR is a fast-curing high performance vinylester resin for anchoring in compact materials. It is injectable in dry, moist or immersed in water. It is suitable for concrete, stone, brick and wood substrates in a wide range of applications: anchoring of doors, balustrades, roller blinds, antennas, consoles, drawers, machinery, protective barriers, steel structures.

It is certified according to EN 1504-6 for structural grouting of reinforcing bars and it is certified according to the requirements of ETAG001 part 5 for the use of resin with threaded bars on cracked and non-cracked concrete and for the use of the resin with improved adhesion bars for diameters from 8 mm up to 16 mm on concrete.

PHYSICAL PROPERTIES

- Nature: epoxy acrylate resin without styrene
- Color: gray (comp. A : white / comp. B : black)
- Specific weight: 1,60 kg/l at 20°C

LAYING TIME

Substrate temperature	Workability time	Time before loading
30°C	3 mins	20 mins
25°C	4 mins	30 mins
20°C	6 mins	45 mins
10°C	12 mins	1 h 30'
5°C	15 mins	2 h
0°C	25 mins	3h

The min. application temperature is +5°C

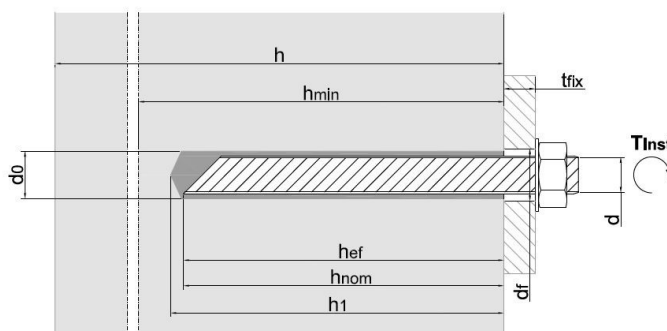
NUMBER OF ANCHORS

THREADED BARS	HOLE d_0 [mm] x h_1 [mm]	N° ANCHORS IN FILLED MATERIALS	N° ANCHORS IN PERFORATED MATERIALS
M8	10 x 90	± 72	± 35

M10	12 x 95	± 52	± 21
M12	14 x 115	± 34	± 21
M16	18 x 130	± 21	± 21
M20	24 x 175	± 7	± 12
M24	28 x 215	± 5	± 12

The number of anchors specified above was determined by counting only the theoretical volume of product needed to fill the hole, excluding the volume of the bar inserted. Although standard waste is included in the theoretical calculation, the actual quantity of product may differ from this according to the actual method of installation adopted.

INSTALLATION DATA



d	Bar diameter
h_{min}	Min. thickness of the substrate
d_0	Hole diameter
h_1	Hole depth
h_{nom}	Insertion depth
h_{ef}	Anchoring effective depth
S_{cr}	Characteristic centre to

	centre
C_{cr}	Characteristic distance from the edge
S_{min}	Min. centre to centre distance
C_{min}	Min. distance from the edge
t_{fix}	Anchoring thickness
d_f	Hole diametre of anchoring thickness
S_w	Spanner
T_{inst}	Tightening torque
l_v	Anchoring length

Threaded bars performances for anchoring on RC support.
(non-cracked concrete)

	M8	M10	M12	M16	M20*	M24*
TYPE OF BAR	> 5,8 - A4/70					
h_{min}	110	120	140	161	218	266
d_0	10	12	14	18	24	28
h_1	85	95	115	130	175	215
h_{nom}	80	90	110	125	170	210
h_{ef}	80	90	110	125	170	210
S_{cr}	211	263	291	360	450	540
C_{cr}	105	132	145	180	225	270
S_{min}	40	40	40	50	60	80
C_{min}	40	40	40	50	60	80
T_{fix} (min - max)	0-1500	0-1500	0-1500	0-1500	0-1500	0-1500
d_f	9	12	14	18	22	26
S_w	13	17	19	24	30	36
T_{inst}	10	20	40	80	130	200

(*) Diametres without certification ETA-CE

Improved adhesion bar performances

• NON-CRACKED CONCRETE

	Φ8	Φ10	Φ12	Φ14	Φ16
TYPE OF BAR	B450C - BST500				
d_0	12	14	16	18	20
h_{min}	110	120	142	161	180
h_1	85	95	115	130	145
h_{ef}	80	90	110	125	125
S_{cr}	202	242	277	323	351
C_{cr}	101	121	139	162	175
S_{min}	40	40	40	40	50
C_{min}	40	40	40	40	50

• SOLID BRICK

	M8	M10	M12	M16
TYPE OF BAR	> 4,6 - A2/70 - A4/70			

	10	12	14	18
d_0	10	12	14	18
h_{min}	200	250	300	350
h_1	85	90	100	130
h_{nom}	80	85	95	125
h_{ef}	80	85	95	125
S_{cr}	160	200	240	320
C_{cr}	200	200	200	200
S_{min}	100	100	100	100
C_{min}	100	100	100	100
t_{fix}	10	20	30	35
d_f	9	12	14	18
S_w	13	17	19	24
T_{inst}	7	15	25	30

• HOLLOW BRICK

	M8	M10	M12
TYPE OF BAR	> 4,6 - A2/70 - A		
d_0	12	16	20
h_{min}	100	100	100
h_1	85	90	90
h_{nom}	80	85	85
h_{ef}	80	85	85
S_{cr}	$l_{unit,max}^*$	$l_{unit,max}$	$l_{unit,max}$
C_{cr}	$0,5 \times l_{unit,max}$	$0,5 \times l_{unit,max}$	$0,5 \times l_{unit,max}$
S_{min}	100	100	120
C_{min}	100	100	120
t_{fix}	10	20	30
d_f	9	12	14
S_w	13	17	19
T_{inst}	3	4	6

(*) $l_{unit,max}$ is the maximum size of masonry block

• GLULAM

	M8	M10	M12	M16
TYPE OF BAR	> 4,6 - A2/70 - A4/70			
d_0	10	12	14	18
h_{min}	160	200	240	320
h_1	85	105	125	165
h_{nom}	80	100	120	160
h_{ef}	80	100	120	160
S_{cr}	100	125	150	200
C_{cr}	800	100	120	160
S_{min}	50	50	60	80
C_{min}	50	50	60	80
t_{fix}	10	20	30	35
d_f	9	12	14	18
S_w	13	17	19	24

T_{inst}	7	15	25	30
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Loading data

Loading data with effective average anchoring depth for cracked concrete (C20/25) at $T = 24^{\circ}\text{C}$

Bar	Bar diameter	Effective depth of anchoring	Average load under tension	Average shear load	Characteristic tensile load	Characteristic shear load	Acceptable tensile load	Acceptable shear load
	d [mm]	h_{ef} [mm]	N_{Rum} [mm]	V_{Rum} [mm]	N_{Rk} [mm]	V_{Rk} [mm]	N_{rec} [Nm]	V_{rec} [kN]
> 5,8	M8	80	19	11,4	19	9,5	9	5,4
> 5,8	M10	90	30,2	18,1	30,2	15,1	14,3	8,6
> 5,8	M12	110	43,8	26,3	43,8	21,9	20,8	12,5
> 5,8	M16	125	70,5	48,9	61,2	40,8	29,2	23,3
> 5,8	M20	170	96,1	76,2	82,3	63,5	32,6	36,2
> 5,8	M24	210	126,7	110,4	108,4	92	43	52,5

Loading data with effective average anchoring depth for non-cracked concrete (C20/25) at $T = 24^{\circ}\text{C}$

Bar	Bar diameter	Effective depth of anchoring	Average load under tension	Average shear load	Characteristic tensile load	Characteristic shear load	Acceptable tensile load	Acceptable shear load
	d [mm]	h_{ef} [mm]	N_{Rum} [mm]	V_{Rum} [mm]	N_{Rk} [mm]	V_{Rk} [mm]	N_{rec} [Nm]	V_{rec} [kN]
REBAR B450C BSST500	$\Phi 8$	80	27,1	16,2	25,5	13,5	10,1	7,7
REBAR B450C BSST500	$\Phi 10$	90	35,9	25,4	31,9	21,2	12,6	12,1
REBAR B450C BSST500	$\Phi 12$	110	51,7	36,6	43,3	30,5	17,2	17,4
REBAR B450C BSST500	$\Phi 14$	125	62,4	49,8	54,4	41,5	21,6	23,7
REBAR B450C BSST500	$\Phi 16$	140	75	65,1	64	54,2	25,4	31

Performance according to the requirements of EN 1504-6 ("Anchoring of steel reinforcement")

Characteristics	Limits EN 1504-6 "Anchoring of steel reinforcement"	Typical value
Chloride ion content	$\leq 0,05\%$	OK
Pull-out resistance of steel bars Displacement of a load of 75 KN [mm] EN 1881	$\leq 0,6$	OK
Creep Displacement of a load of 50 KN for three months [mm] EN 12617-3	$\leq 0,6$	OK
Glass transition temperature EN 12614	$\geq 45^{\circ}\text{C}$	OK
Reaction to fire EN 13501-1	Euroclass according to 5,5	F
Hazardous substances release	According to 5,4	OK

APPLICATION



Gun application

- Choose a drill of suitable size according to the bar to be anchored.
- Remove water and dirt (dust and loose material) with a circular brush and blower or with a compressor. The elements to be fixed must be clean.
- Unscrew the cartridge cap.
- Screw the nozzle onto the cartridge.
- Insert the cartridge into the gun.
- Extrude the product until the resin has a homogeneous light gray color (avoid using the first 10 ml).
- Inject the product from the base of the hole up to 2/3.
- Insert the element to be fixed.
- Unscrew the mixing nozzle and replace the cap.

PACKAGING

Ctr 400 ml – Box 12 pcs

STORAGE

Store the product in a well-ventilated place away from direct sunlight. Store between 5°C and 30°C . In unopened original packaging, the product is stable for 12 months.

RELATED PRODUCTS



Kimitech VINYL CTR
gun

WARNING

Product intended for professional use.

Before the injection, check the expiry date of the product, the resistance of the substrate and the environment temperature.

The marking obligations are not related to the intrinsic nature of a given product, but to the use to which a specific material is intended: before placing the order, the buyer shall submit all the documentation available to the works supervision in order to determine the materials suitability (in terms of certifications and performance) in relation to the use for which they are intended.

For further information and advice on safe handling, storage and disposal of chemical products, the user must refer to the most recent Safety Data Sheet, containing physical, ecological, toxicological and other data related to safety.

The information and requirements indicated in this Technical Data Sheet are based on our current knowledge and experience and are to be considered, in any case, purely indicative. They cannot guarantee the final result of the applied product and they have to be confirmed by exhaustive practical applications; therefore the user must test the suitability of the product for the intended application and its purpose. Users must always refer to the latest version of the local technical data sheet related to the product.