IKA-CEII 400ml PURE EPOXY

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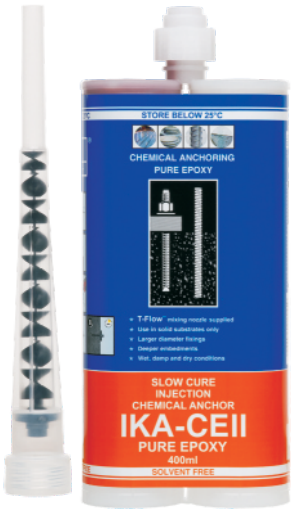

Product Description

IKA-CEII 400ml Pure Epoxy 1:1 Resin is a high performance, two component epoxy resin system. Applied in one single action this slow cure resin will produce a high performance, strong fixing with exceptionally high chemical resistance.

Key Features

- Solvent Free, Odourless Resin, No Shrinkage.
- Ideal for Diamond Drilled Holes.
- Ideal for Rebar Usage.
- Highest Durability.
- Can be used in Wet holes or Underwater.
- Longer Working Times.

Approvals

Tested by:

CSTB le futur en construction

CE Marking

VOC CLASSIFICATION* A+ (A+ A B C)

*Information on the emission of volatile substances in indoor air, with a risk of inhalation toxicity, on a scale ranging from class A + (very low emissions) to C (high emissions) level.

CE 1220
15
1220-CPR-1561
ETA-15/0226
ETAG 01 05
Rebar Ø 8 to 32mm

WYRÓB BUDOWLANY
0973/W

FIRE RATED

WRAS APPROVED MATERIAL

IMPORTANT NOTE: Performance based on clean holes; HAMMER DRILLED - blown and then brushed with a stiff metal brush & blown again.

Typical Gel and Curing Time*

BASE MATERIAL TEMPERATURE (°C)	45	40	35	25	15	5
TYPICAL GEL TIME (mins)	6	8	12	20	60	120
MIN. LOAD TIME (mins)	90	120	180	300	600	960

*Figures are based on M12 fixings. Full cure is achieved after 24 hours.
All specifications are based on use of a supplied IKA Anchor Mixer.
Curing Time is doubled in wet conditions. Product will not cure below 5°C

Typical Performance Data at Standard Embedment Depth

Size	Concrete, $f_{ck,cube}$ = 25N/mm² (C20/25) 5.8 Grade Studding									SETTING DATA				
	Characteristic Resistance (kN)		Design Resistance (kN)		Recommended Load (kN)		Characteristic Edge Distance (mm)		Characteristic Spacing (mm)	Hole Diameter In Concrete	Hole Diameter In Fixture	Standard Embedment In Concrete	Recommended Torque (Nm)	Approx. No. of Holes per 400mm Cartridge
	Tension (N_{rk})	Shear (V_{rk})	Tension (N_{rd})	Shear (V_{rd})	Tension (N_{rec})	Shear (V_{rec})	Tension ($C_{cr,N}$)	Shear ($C_{cr,V}$)		(mm)	(mm)	(mm)		
M8	19.0	9.5	12.7	7.6	9.1	5.4	80	80	160	10	9	80	11	88
M10	30.2	15.1	20.1	12.1	14.4	8.6	100	90	200	12	11	90	22	60
M12	43.8	21.9	29.2	17.5	20.9	12.5	120	110	240	14	13	110	38	40
M16	81.6	40.8	54.3	32.7	38.8	23.3	160	125	320	18	17	125	95	28
M20	127.4	63.7	84.9	51.0	60.7	36.4	200	180	400	24	22	170	170	8
M24	183.6	91.8	122.4	73.4	87.4	52.4	240	220	480	28	26	210	260	5
M30	280.5	142.5	187.3	114.0	133.6	81.4	300	280	600	35	33	280	480	2

Typical Ultimate Physical Properties

	N/mm²	TEST METHOD	STORAGE / SHELF LIFE	IMPORTANT
COMPRESSIVE STRENGTH	88.56	(EN ISO 604) / (ASTM 695)	This product should be stored between +5˚C & +35˚C. The Shelf life of the product is 24 months from the manufacture date.	The information and data given is based on our own experience, research and testing and is believed to be reliable and accurate. However, as IKA Anchors cannot know the varied uses to which its products may be applied, or the methods of application used, no warranty as to the fitness or suitability of its products is given or implied. It is the users responsibility to determine suitability of use. For further information please contact our Technical Department.
FLEXURAL STRENGTH	52.79	(EN ISO 178) / (ASTM 790)		
FLEXURAL MODULUS	4331.00	"		
TENSILE STRENGTH	26.94	(EN ISO 527) / (ASTM 638)		
E MODULUS	7267.00	"		
VOC CONTENT	0.000%	0.00 g/L		

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Performance Data for Various Stud Strengths, Material and Rebar

Concrete Strength Class: C20/25 (25N/mm² Cylinder; 30N/mm² 150mm cube).

IMPORTANT NOTE:
Performance based on clean holes;
HAMMER DRILLED - Blown and then brushed with a stiff metal brush & blown again.
DIAMOND DRILLED - Ensure hole is rinsed until return water flow is clear.

5.8 Grade Studding

Stud Diameter (mm)	Hole Diameter (mm)	Design Resistance (N_{rd}) (kN)																			Fd,s hef failure (mm)	Fd,s design load (kN)
8	10	12.7																			59	12.7
10	12	20.1															=	Steel Failure			75	20.1
12	14		29.2																		91	29.2
16	18					51.3	54.4														127	54.4
Depth (mm)		80	90	100	110	120	130	140	150	160	170	180	190	200	220	240	260	280	300	350		
20	24	84.9																			163	84.9
24	28			122.4																	196	122.4
30	35								181.3												232	181.3
Depth (mm)		170	180	190	200	220	240	260	280	300	350	400	450	500	550	600	700	800	900	1000		

8.8 Grade Studding

Stud Diameter (mm)	Hole Diameter (mm)	Design Resistance (N_{rd}) (kN)																			Fd,s hef failure (mm)	Fd,s design load (kN)
8	10	17.1	19.2	19.5																	91	19.5
10	12		24.0	26.7	29.4	30.9											=	Steel Failure			116	30.9
12	14				35.3	38.5	41.7	45.0													140	45.0
16	18					51.3	55.6	59.8	64.1	68.4	72.6	76.9	81.2	83.7							196	83.7
Depth (mm)		80	90	100	110	120	130	140	150	160	170	180	190	200	220	240	260	280	300	350		
20	24	88.7	93.9	99.1	104.3	114.7	125.2	130.7													251	130.7
24	28				125.2	137.7	150.2	162.7	175.2	188.3											301	188.3
30	35								219.1	234.7	273.8	278.9									357	278.9
Depth (mm)		170	180	190	200	220	240	260	280	300	350	400	450	500	550	600	700	800	900	1000		

10.9 Grade Studding

Stud Diameter (mm)	Hole Diameter (mm)	Design Resistance (N_{rd}) (kN)																			Fd,s hef failure (mm)	Fd,s design load (kN)
8	10	17.1	19.2	21.4	23.5	25.6	27.2														127	27.2
10	12		24.0	26.7	29.4	32.0	34.7	37.4	40.1	43.1							=	Steel Failure			161	43.1
12	14				35.3	38.5	41.7	44.9	48.1	51.3	54.5	57.7	60.9	62.6							195	62.6
16	18					51.3	55.6	59.8	64.1	68.4	72.6	76.9	81.2	85.5	94.0	102.6	111.1	116.6			273	116.6
Depth (mm)		80	90	100	110	120	130	140	150	160	170	180	190	200	220	240	260	280	300	350		
20	24	88.7	93.9	99.1	104.3	114.7	125.2	135.6	146.0	156.5	182.0										349	182.0
24	28				125.2	137.7	150.2	162.7	175.2	187.8	219.1	250.4	262.2								419	262.2
30	35								219.1	234.7	273.8	312.9	352.1	388.5							497	388.5
Depth (mm)		170	180	190	200	220	240	260	280	300	350	400	450	500	550	600	700	800	900	1000		

IKA-CEII 400ml
PURE EPOXY

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A4-70 Stainless Steel Studding

Stud Diameter (mm)	Hole Diameter (mm)	Design Resistance (N_{rd}) (kN)																			Fd,s	
																					hef failure (mm)	design load (kN)
8	10	13.7																			64	13.7
10	12		21.7														=	Steel Failure			81	21.7
12	14				31.6																98	31.6
16	18					51.3	55.6	58.8													138	58.8
Depth (mm)		80	90	100	110	120	130	140	150	160	170	180	190	200	220	240	260	280	300	350		
20	24	88.7	91.7																		176	91.7
24	28				125.2	132.1															211	132.1
30	35	133.0	139.8																		179	139.8
Depth (mm)		170	180	190	200	220	240	260	280	300	350	400	450	500	550	600	700	800	900	1000		

A4-80 Stainless Steel Studding

Stud Diameter (mm)	Hole Diameter (mm)	Design Resistance (N_{rd}) (kN)																			Fd,s	
																					hef failure (mm)	design load (kN)
8	10	15.7																			73	15.7
10	12		24.0	24.8													=	Steel Failure			93	24.8
12	14				35.3	36.1															113	36.1
16	18					51.3	55.6	59.8	64.1	67.2											157	67.2
Depth (mm)		80	90	100	110	120	130	140	150	160	170	180	190	200	220	240	260	280	300	350		
20	24	88.7	93.9	99.1	104.8																201	104.8
24	28				125.2	137.7	151.0														241	151.0
30	35								219.1	223.7											286	223.7
Depth (mm)		170	180	190	200	220	240	260	280	300	350	400	450	500	550	600	700	800	900	1000		

High Bond Reinforcing Bars fyk=500N/mm²

Rebar Diameter (mm)	Hole Diameter (mm)	Design Resistance (N_{rd}) (kN)																			Fd,s	
																					hef failure (mm)	design load (kN)
8	10-12	17.1	21.4	21.9																	102	21.9
10	12-14		26.7	32.0	34.1												=	Steel Failure			128	34.1
12	16-18			38.5	44.9	49.2															153	49.2
14	18-20				52.3	59.8	66.9														179	66.9
16	20-22					68.4	76.9	85.5	87.4												205	87.4
Depth (mm)		80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	450	500		
20	28	104.3	117.4	130.4	136.6																262	136.6
25	32			163.0	179.3	195.6	213.4														327	213.4
32	40					250.4	292.1	333.8	349.7												419	349.7
40	50							417.3	469.4	521.6	546.3										524	546.3
Depth (mm)		200	225	250	275	300	350	400	450	500	550	600	700	800	900	1000	1100	1200	1300	1400		

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Reduction factors: Spacings and Edge Distances

Spacing Reduction Factor f_A								Edge Distance Reduction Factor f_R																
Tensile Load / Shear Load								Tensile Load f_{RN}									Shear Load f_{RV}							
Spacing	Ø Anchors / Rebar (mm)							Edge Distance (mm)	Ø Anchors / Rebar (mm)								Ø Anchors / Rebar (mm)							
	8	10	12	16	20	24	30		8	10	12	16	20	24	30	(mm)	8	10	12	16	20	24	30
40	0.64							40	0.64							40	0.25						
50	0.67	0.63						50	0.73	0.63						50	0.44	0.30					
60	0.70	0.65	0.63					60	0.82	0.70	0.63					60	0.63	0.48	0.30				
70	0.73	0.68	0.64					70	0.90	0.77	0.68					70	0.81	0.65	0.44				
80	0.76	0.70	0.66	0.63				80	1.00	0.84	0.74	0.63				80	1.00	0.83	0.58	0.40			
90	0.79	0.73	0.68	0.64				90		0.91	0.80	0.67				90		1.00	0.72	0.53			
100	0.82	0.75	0.70	0.65	0.63			100		1.00	0.86	0.72	0.63			100			0.86	0.67	0.35		
125	0.89	0.81	0.75	0.69	0.66	0.63		110			0.92	0.77	0.66			110			1.00	0.80	0.44		
150	0.96	0.88	0.80	0.73	0.69	0.65	0.63	120			1.00	0.81	0.70	0.64		125				1.00	0.58	0.35	
160	1.00	0.90	0.82	0.74	0.70	0.66	0.63	140				0.91	0.78	0.67	0.63	140					0.72	0.46	0.30
175		0.94	0.85	0.76	0.72	0.68	0.65	160				1.00	0.85	0.73	0.65	160					0.91	0.62	0.35
200		1.00	0.90	0.80	0.75	0.70	0.67	180					0.93	0.80	0.69	180					1.00	0.77	0.46
225			0.95	0.84	0.78	0.73	0.69	200					1.00	0.86	0.74	200						0.92	0.57
240			1.00	0.86	0.80	0.75	0.70	220						0.92	0.79	220						1.00	0.68
250				0.87	0.81	0.76	0.71	240						1.00	0.83	240							0.78
275				0.91	0.84	0.78	0.73	260							0.88	280							1.00
280				0.92	0.85	0.79	0.73	280							0.93								
300				0.95	0.88	0.81	0.75	300							1.00								
320				1.00	0.90	0.83	0.77																
350					0.94	0.86	0.79																
400					1.00	0.92	0.83																
440						0.96	0.87																
480						1.00	0.90																
500							0.92																
550							0.96																
600							1.00																

Characteristic (Vrk,s) & Design (Vrd,s) Shear Loads for Various Stud Grades + Rebar

Stud Diameter (mm)	Stud Grade 5.8		Stud Grade 8.8		Stud Grade 10.9		Stud Grade A4-70		Stud Grade A4-80	
	Vrk,s (kN)	Vrd,s (kN)	Vrk,s (kN)	Vrd,s (kN)	Vrk,s (kN)	Vrd,s (kN)	Vrk,s (kN)	Vrd,s (kN)	Vrk,s (kN)	Vrd,s (kN)
M8	9.5	7.6	14.6	11.7	19.0	15.2	12.8	8.2	14.6	9.4
M10	15.1	12.1	23.2	18.6	30.2	24.1	20.3	13.0	23.2	14.9
M12	21.9	17.5	33.7	27.0	43.8	35.1	29.5	18.9	33.7	21.6
M16	40.8	32.7	62.8	50.2	81.6	65.3	55.0	32.5	62.8	40.3
M20	63.7	51.0	98.0	78.4	127.4	101.9	85.8	55.0	98.0	62.8
M24	91.8	73.4	141.2	113.0	183.6	146.8	123.6	79.2	141.2	90.5
M30	142.5	114.0	207.6	166.1	269.9	215.9	129.8	64.9	207.6	103.8

Rebar Diameter (mm)	BSt 500 Rebar	
	Vrk,s (kN)	Vrd,s (kN)
8	16.6	11.1
10	25.9	17.3
12	37.3	24.9
14	50.8	33.9
16	66.4	44.3
20	103.9	69.3
25	162.0	108.0
32	265.1	176.7
40	414.6	276.4

Notes:

All grades shown for information. M30 for A4-70 tensile strength of 500N/mm2, instead of 700N/mm2.
Safety Factor is 1.25 for all carbon steel. Safety Factor is 1.56 for stainless steel, up to M24, M30 is 2.0. Safety Factor is 1.5 for BSt 500 rebar.